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THE

MEDICAL JOURNAL OF AUSTRALIA

(With which "The Australasian Medical Gazette," and "The Australian Medical Journal" are incorporated.)

The Journal of the Australian Branches of the British Medical Association.

VOL. I.—3RD YEAR—No. 18. SYDNEY: SATURDAY, APRIL 29, 1916. PRICE 6D.

TRADE MARK AD 1913

'The Allenburys' Foods

ALLEN & HANBURYS LTD. desire to draw the attention of Medical Men to the undermentioned comparison of the "Allenburys" Milk Foods No. 1. and No. 2, when mixed according to the directions, with Human and Cow's Milk.

	Cow's Milk.	Human Milk.	Prepared as Directed. The Allenburys' Milk Food No. 1.	Prepared as Directed. The Allenburys' Milk Food No. 2.	Cow's Milk and Water Equal parts (a)
Fat	**3.0**	**3.5**	**3.33**	**3.06**	**1.5**
Casein	3.0	1.0	1.12	1.0	1.5
Albumen	0.5	1.2	1.00	0.81	0.25
Carbohydrates ...	4.5	6.2	10.20	10.86	2.2
Mineral Matters ...	0.7	0.3	0.67	0.62	0.35
Water	88.3	87.8	83.68	83.65	95.0

(a) The strength usually given to a young infant.

NOTE.—It will be noticed that the proportion of **Casein in Cow's Milk is greatly in excess**, whilst the **Albumen and Lactose are deficient. No dilution of water can correct this.** When cream is added to diluted milk the proportion of fat can be made correct, **but the deficiency of Milk Albumen and Lactose is still further exaggerated.**

The Table of Analysis of Infants' Foods, when mixed ready for use, is more important than the analysis of the dry powder as determining the value of foods as compared with human milk.

Refer to Note issued by Dr. Robert Hutchison to face Page 470 of his book, "Food and the Principles of Dietetics," Third Edition, Revised and Enlarged, Second Impression, 1913.

THE DEATH KNELL TO GERMAN TRADE.

Substitute for Aspirin

An Opportunity for Practical Patriotism.

And an opportunity to down an enemy preparation is offered the medical profession of Australasia, through the appearance on this market of **British Kephirin,** manufactured in Australia, by British labour—a proved substitute superior to Aspirin.

Not only a substitute for Aspirin, but a preparation better than the original remedy through the fact that taken grain for grain, **Kephirin** equals Aspirin up to the maximum dose of the enemy drug, and then offers further advantages in that additional dosage can be administered where required in combating obstinate symptoms.

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FORMULA.	Per centage *Composition.
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Salicylic Acid	33 „
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*The constituents being chemically combined, i.e., not merely mixed, it is impossible for anyone unacquainted with the process to produce an equivalent.

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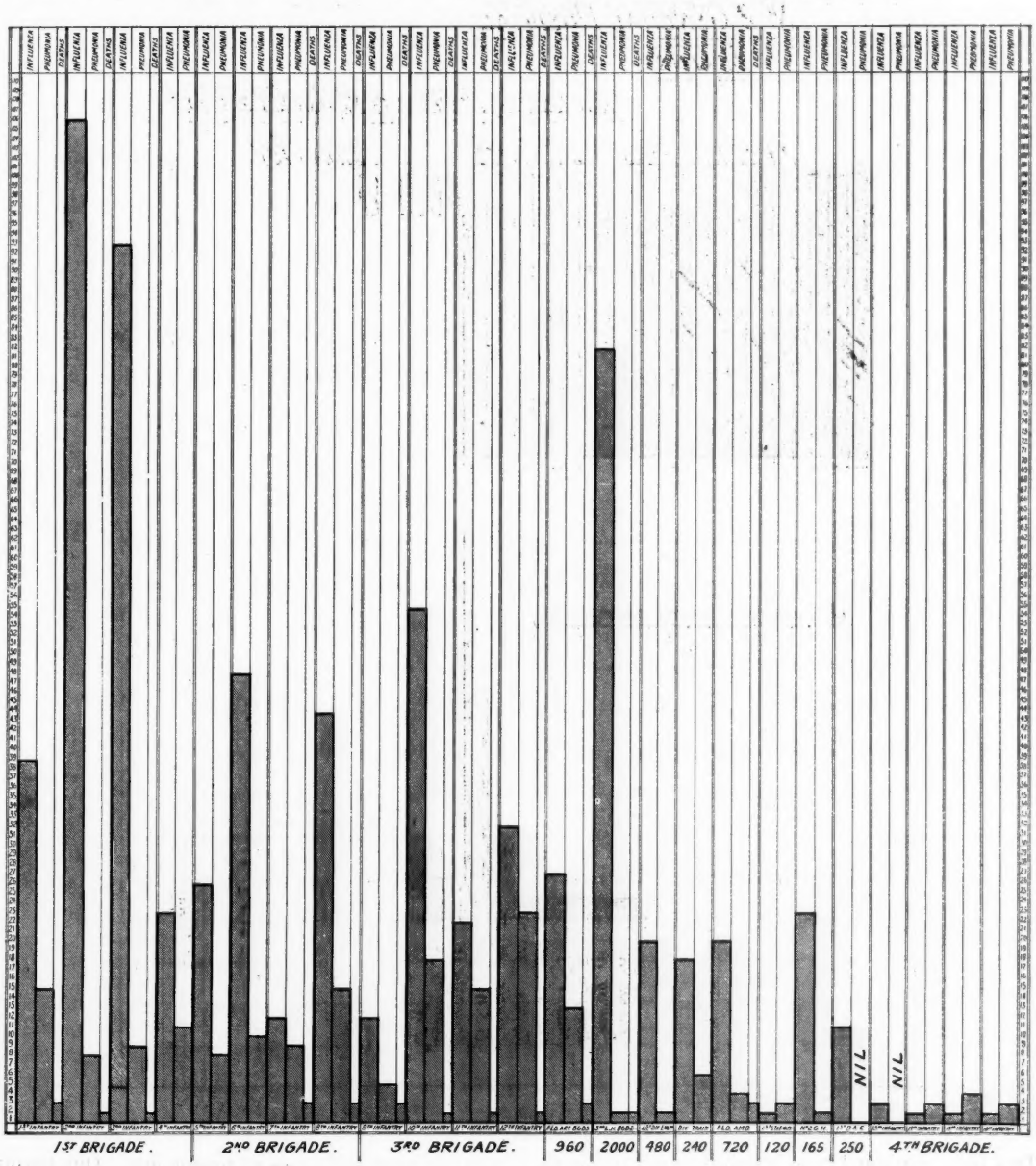
THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. I.—3RD YEAR. SYDNEY: APRIL 29, 1916. No. 18.

TWELVE MONTHS' SERVICES AT THE FRONT.[1]

By **J. W. Springthorpe, M.D. (Melb.), M.R.C.P. (Lond.),**
Colonel, A.A.M.C., A.I.F., Melbourne.

When we left Australia I ventured the statement that there would be as much work for the physician as for the surgeon. Statistics show that there has been a good deal more. Further, the physician's part extends to preventive and other matters which the surgeon has not much time to deal with. This is a century of prevention, and we look to preventive measures as of fundamental value.

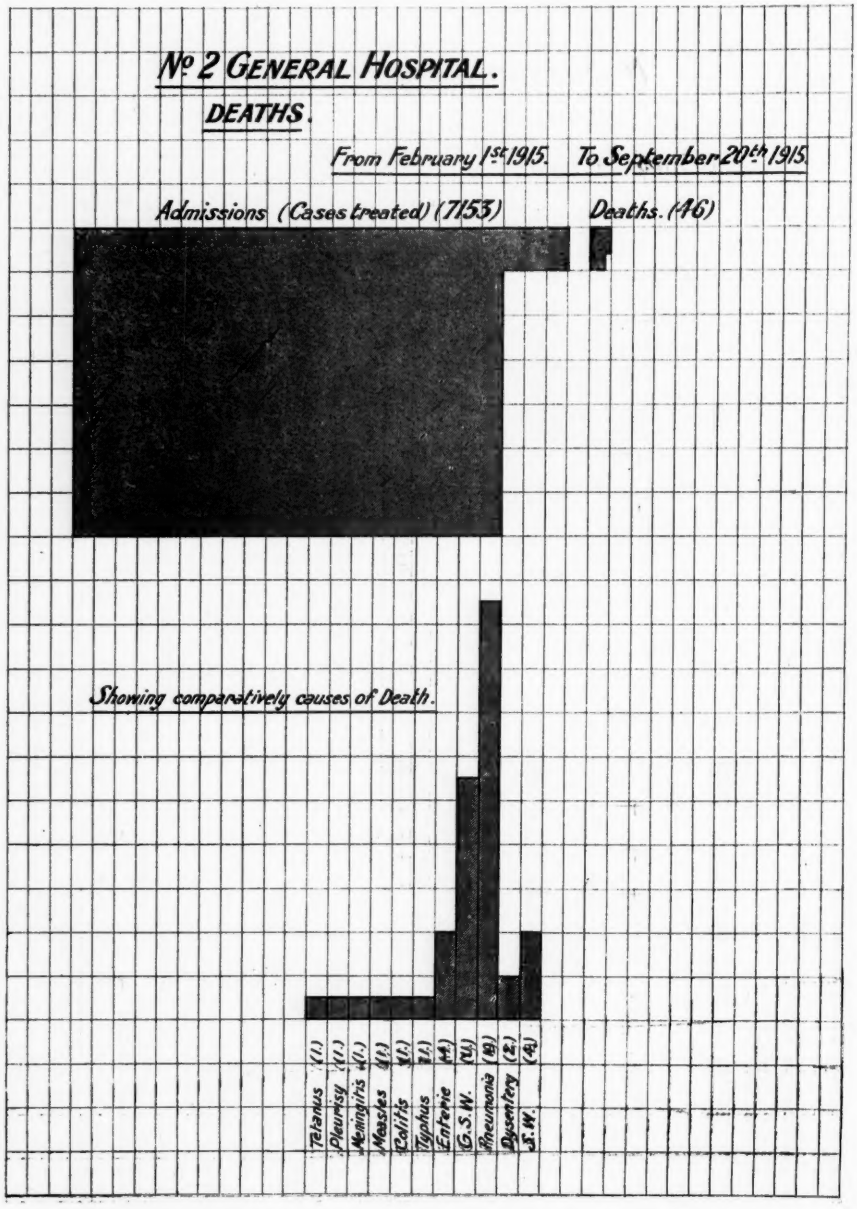


Graph I.

It is impossible to give anything like a presentation of all that twelve months' service means, together with criticism, which at the present time would do no good, in a brief half-hour.

[1] Read at a meeting of the Victorian Branch of the British Medical Association on March 1, 1916.

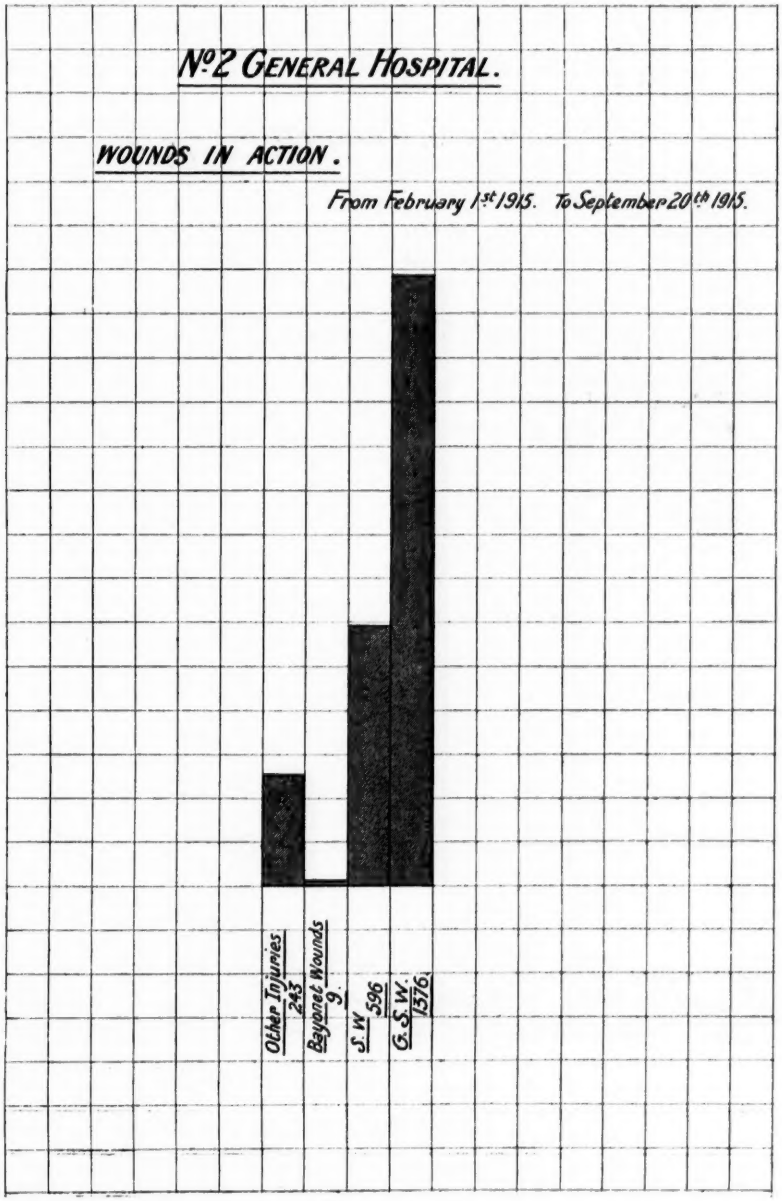
All that I can do is to give general views of what I have presented in four or five reports to the proper authorities. In my opinion prevention is our most important work, and a little prevision is better than much subsequent criticism.



Graph II.

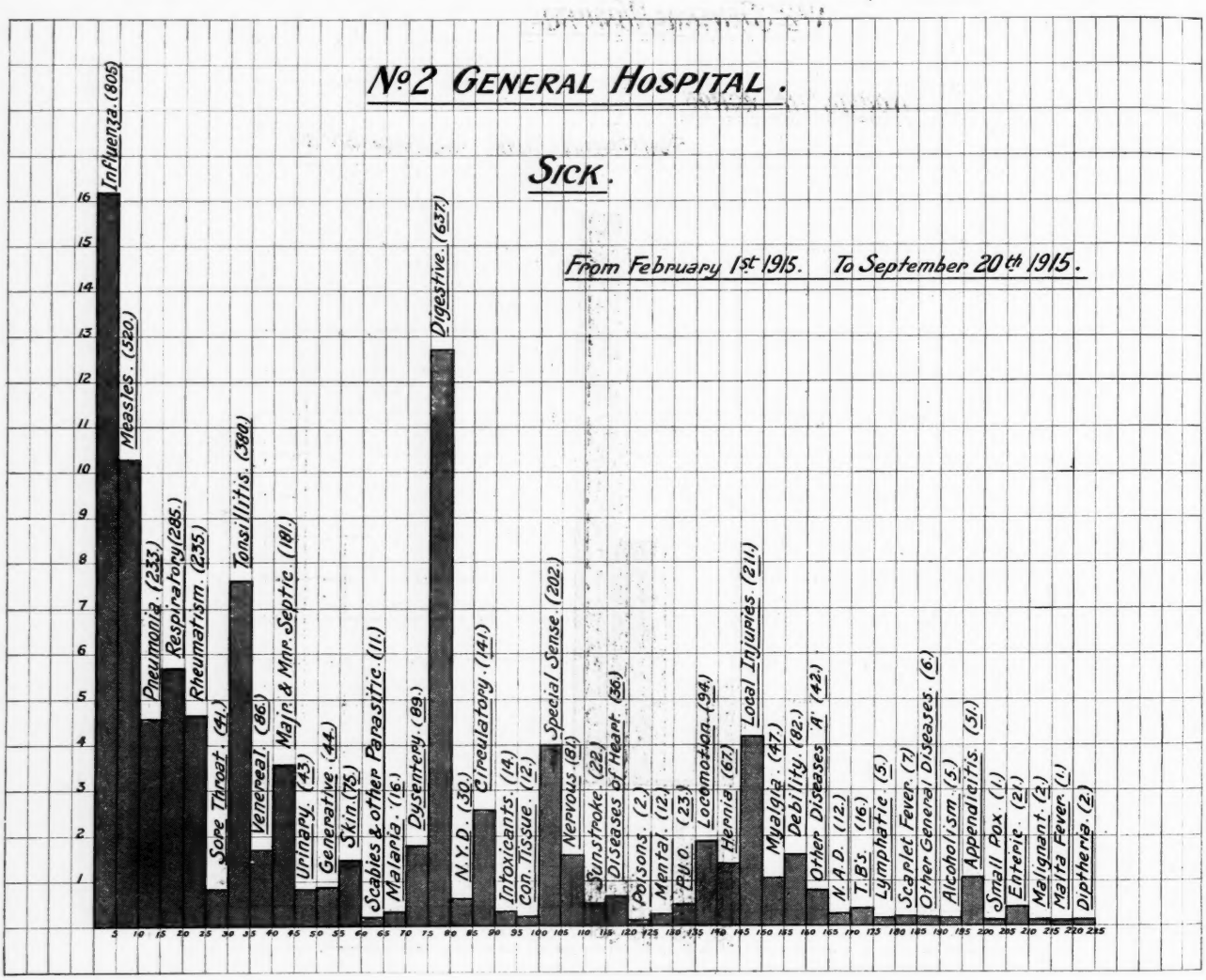
Two fully equipped base hospitals went to Egypt. We in No. 2 had to deal with our troops at Mena. They were 20,000 picked men, and I never saw so much serious disease in the time as I saw there. It required the combination of many reasons beside the large number of troops collected together, and the influenza and measles which were constantly being brought there. I have dealt with these in various reports. The main illnesses there were respiratory trouble and pneumonia. In my 28 years' experience at the Melbourne Hospital I have never seen so many or such bad cases of pneumonia. Our hospital at Mena was like a grave-yard, where the corpses rose up and barked at you. What is more, I never gave so much morphine in any five years of my life before. The pneumonia was not to any extent directly connected with influenza; it was true lobar

pneumonia. In many cases there was diaphragmatic pleurisy. We attributed this to the soldiers carrying their packs on their backs during strenuous marches, becoming overheated and sweating, then coming in and getting a chill. In over 200 cases of pneumonia we never had one in an officer. I will leave it to you to guess at reasons. Causation included questions of food, sites of camp, amount of work done, etc. I have here a very interesting graph, showing the amount of influenza and pneumonia in the respective brigades, with the ratio of deaths, and appended to the report are the differences in the foregoing conditions from which various conclusions seem warranted. Many other interesting factors required consideration. The bell tent is a magnificent thing for healthy people; but when you have 13 men sleeping in such a tent with the flaps down, and all breathing a highly contaminated atmosphere, it is no wonder if infectious diseases should spread. Then again, there was the ubiquitous dust, and almost every patient had unusually severe throat trouble. It was an interesting clinical point to decide what was influenza, what tonsillitis, and what some unknown "Nile Fever" or "Pyramid


No 2 General Hospital.
Wounds in Action.
From February 1st 1915. To September 20th 1915.
Other Injuries 243
Bayonet Wounds 9.
S. W. 596
G. S. W. 1376

Graph III.

Cough." Even influenza had its maximum local signs. There were similar cases of pneumonia, etc., at Heliopolis, and Lieutenant-Colonel Maudsley has sent in a report on them very similar to mine. There was, I believe, very little pneumonia at Mahdi, though there was the same class of men there, and the majority, though not all, of the other conditions were similar.



Graph IV.

In a fourth graph you can see the total amount of disease we had to deal with. Out of 20,000 presumably healthy troops we had 3,300 patients in two and a half months. It was our duty to look for causes and to stop them; but they left before we could do so.

As regards the pneumonia, the death-rate, though small, is out of all proportion to the severity of the attacks. Our death-rate was 8%; while out of half a million cases in healthy adults the death-rate has been 4%. In the Melbourne Hospital it is 20%, but there all classes of persons are received, old and young, alcoholic, renal, etc.; ours were picked men. Further, ours were in the season, and, according to the Dean of the Faculty of Medicine there, such an outbreak had not occurred in Egypt before. Amongst other things, the camp at Mena was pitched in February, on ground which in November was hidden by the waters of the Nile. The Heliopolis camp, however, was on dry ground. I mention these facts to show how difficult a matter it is to assess causation accurately.

More interesting events happened in the later half of the year, when we received cases of digestive troubles from Anzac and Mudros. All troops had been protected by inoculation, at least three times against typhoid and twice against cholera. With us there was no cholera; nor, as far as I know, has

there been any where there was inoculation. As to typhoid, inoculation did not stop the disease which they are all wont to call "enteric." Colonel Hunter told me that the difficulty of standardization was so great that he proposed officially to call all forms of typhoid "enteric." If they are not the same—well, they are first cousins.

Here, again, every hospital must take its own statistics, and suffer from its own limitations. Hence experience and conclusions differ.

We remained at Cairo, and between us and the front there were two screens: (*a*) the hospitals at Mudros, No. 3 General Hospital, and (*b*) the two stationary hospitals. At Alexandria we had no general hospital; we did not know, therefore, what these kept diverting from coming to us. Some say they diverted everything except slight cases. However that may be, we had exceedingly few cases of real typhoid of a serious character; but we had a large number of cases of paratyphoid, according to the bacteriologist. Whenever we received a "positive" report it was paratyphoid B. Later on there was an epidemic at Heliopolis, which was caused by *bacillus paratyphosus A*. This was the only time that form was found. Nearly all our cases were antecedent colitis cases. They started from Anzac in the incubation period; after they had been four or five days on the way they reached us, and we recognized them by the "Wunderlich" rise of temperature. Except in relapses, I had only seen it twice before in the Melbourne Hospital, where our cases do not come in until after the first week; but here we had it almost all the time. Another point was that only one of the patients died, and he had overworked himself, and died from pneumonia. In not one of the enteric cases was there any deep ulceration at all; not one had sloughing; not one had intestinal hæmorrhage. If inoculation does anything, and if our experience is a fair sample, it may have knocked out "typhoid," but it did not knock out paratyphoid.

More serious and more interesting than typhoid were the questions of colitis. We had letters from the front saying: "For God's sake, send us something." Practically the only food the soldiers were receiving was bully beef and biscuits; that, plus flies so thick that the only difference between them and the jam was that the flies moved; flies, too, that had come from decomposed bodies of Turks. With such a diet, combined with the absence of sufficient water, monotony and heat, no wonder that every second man had intestinal trouble, gastric affection, and acute colitis. At Ghezireh we satisfied ourselves that these cases were due to improper food, and that the germ element was quite secondary. We examined one case after another, and found none amœbic or bacillary. Later on, when patients went to Mudros, they got these forms there. One of our marvels was that convalescent troops were sent to Mudros to contract dysentery. They did get definite amœbic dysentery there, and there was an epidemic of a bacillary type; and yet they kept sending sick men there of all places, as if there was nowhere else to send them. For a long time at the start, however, men came back to us, and we cured them with diet and mild drugs, and did not find one case bacillary or amœbic. What was to be done? Then we had two Generals and a Colonel, who managed to escape from Alexandria Hospitals and come up to Cairo. We satisfied ourselves by these examinations of the fæces that none of them were infective forms of dysentery, and that the trouble was purely a matter of food. Just then the Red Cross Commissioners appeared, but their powers did not extend beyond the "officially sick." The Commissioners were appealed to to go to the men's assistance, as the men of the firing line were the only men really worth thinking about. But they could not do so. Mr. Budden, Commissioner from Australia for the Gift Funds, came along—it was his business to reach these men. One of the Generals (General White), on being appealed to, agreed to take action, and said that the only way to accomplish what was wanted was through Ordinance. He saw Colonel Sellheim, who was in charge at Cairo; General Birdwood and then General Maxwell were consulted. General White and Mr. Budden took 400 cases of dutiable foods, etc., but the hospitals at Mudros were so hard up that they stole 300 of these. General White also started a dry canteen at Mudros. The contractor took £3000 worth of food up with him, with the result that he sold out the lot within a few days—one regiment alone would have taken the whole. A further £6000 worth was subsequently sent forward. Just before Christmas Mr. Budden took 34,000 billies and 19,000 Christmas puddings, but owing to the evacuation these never reached Anzac, but the men came to Mudros. As a consequence, the Australians had probably the finest Christmas they had ever had. Difficulty of access had been urged as the cause of failure, but what was wanted was a special ration, not a greater quantity of "bully beef and biscuit," but something different. This our conjoint efforts had inaugurated. A special British Commission appointed by the War Office (under Colonel Hunter) had investigated conditions at the front, and after a dinner given by Mr. Budden on the successful initiation of our scheme, Colonel Hunter told me that the Commission had come to the same conclusion. We had, however, acted before they reported.

There are a number of minor matters of interest:

1. The younger men at the front were a failure. I satisfied myself that men of 19 and 20 cannot stand physical or mental strain such as they are called upon to stand. I saw some boys not much over 17, and it is doubtful if they will ever be the same again, owing to shock and strain.

2. For two months I had to look after chronic rheumatics at Ghezireh, and I made a study of them, and found that practically all had an antecedent attack. If a man has had a definite attack of even muscular rheumatism he cannot go over any length of time in the trenches; he will only be a drag on the others.

3. There were a number of cases of shell shock. When you consider "the hell of fire" which they had endured, you can imagine the state of their nerves; some could not speak, see, nor hear for a month or more; some had tremors of the whole body. Officers, whose courage could not be doubted,

were unable to speak. It requires individuality to stand what these men were called upon to stand. One of our greatest needs is to fit the individual to his best service, not to make him do exactly the same as the other, and trust to Providence to find his proper place.

4. It was astonishing how few tubercular cases occurred with us at any rate; also the small number of cases of alcoholism and renal disease. We had also very few cases of endemic disease, such as Bilharzia, anchylostomiasis, etc. A number of cases of malaria recurred, but few seem to have originated in Egypt. I saw my first case of typhus. We had only sporadic cases of small-pox, cerebro-spinal meningitis (one fulminating case in a healthy adult, who died within 40 hours), quite a number of undoubted dengue, and some of P.U.O. (pyrexia of unknown origin).

It will thus be seen that we in Egypt laboured under a number of disabilities, some of which might have been prevented, others minimized, whilst others were practically unavoidable. Criticism upon these points is at present inadvisable. A great many disabilities have been removed since the visit of our own Surgeon-General Fetherston. We certainly look forward to great improvements in the not distant future, largely in the way of increased initiative and control over our own work and movements.

I would, in conclusion, ask you to beware of conclusions based on the statistical method. With us, until recently, statistics were made up from what the admitting officer (usually a junior) found time to diagnose provisionally. This may have been very misleading. Thus our Mena statistics say there were only 233 cases of pneumonia, but I had 115, and Major Campbell had as many more, and the rest of the staff an indefinite number in addition. Unfortunately I have given up believing in statistics myself.

I must leave the graphs to speak for themselves. They simply give numerical results imperfectly assessed. But if their margin of error varies uniformly —of which there is no proof—they tell tales of variation the causes of which must be sought elsewhere. I have given my own interpretation in official reports. Their main practical value to others must be in widening one's conception of causation, and emphasizing the need of the adoption of real preventive measures as early as possible.

I am sorry that the smallness of time at my disposal, and the lateness of the hour, prevent me from doing my subject justice, but I believe I have placed most of the main medical facts before you. The larger, deeper and more interesting issues cannot even be touched upon. I have the satisfaction, however, of believing that they are well known and appreciated.

SOME SURGICAL EXPERIENCES AT THE FRONT.[1]

By T. P. Dunhill, M.D., Ch.B. (Melb.),
Major, A.A.M.C., A.I.F., Melbourne.

We were some time in Egypt before seeing any surgery. Men were susceptible to classes of ailments which were due to the kind of life lived at Heliopolos. There were a number of cases of hæmorrhoids, and hernia and knee injury, and internal derangement of the knee joint. The hot weather of the tropics and the slackness of boardship life induced constipation and laxness of blood vessels, which led to hæmorrhoids, and possibly may have had some influence in bringing about hernias, latent so far. The strenuousness of the training in Egypt had something to do with the number of cases of knee troubles. Men used to office work were suddenly put to work at high pressure, and the legs had to carry them more hours of the day than they had been used to carrying them. These cases were all I had to attend to while I was in Egypt. The first bullet removed was the result of a quarrel and not of a battle. When I arrived in London the people were being landed in England, and there was a great deal of administrative work to be done, and I was instructed to remain there and help with it. The thousands sent to England were distributed so widely that they could not all come under the attention of leading or capable surgeons. They might be sent to a central hospital such as Birmingham or Manchester. They had to be removed as others came on, and everything was not done that might have been done if they had remained. There were cases still infected, cases of divided nerves, of depressed fractures, mal-union of bones, or of stumps unhealed. It was perfectly safe to have them removed to Red Cross Hospitals, or Voluntary Aid Hospitals, where their wounds healed, but the secondary surgery was not done. When these were collected into our own Australian hospitals, we found that there was really a great deal of work required to be done, and that urgently.

I did not see fractures and wounds of the skull in the early stage, but later. The battle was raging as to whether late or early interference was the better. When they came to us there was no doubt as to what had to be done. The wounds had healed, but the men were suffering from severe headache, and there might be paresis and interference with the vision. We operated on these as quickly as we could by turning down flaps and trephining, or perhaps using a Doyen's burr, so as to investigate the possibility of injury to the brain. Often bits of bone or shell casing were pentrating the dura or brain. At times pieces were in a position that might have given trouble when operated upon. Sometimes the depressed fracture crossed the longitudinal sinus, and we naturally expected trouble, but there was never a great deal of bleeding. When the pieces of depressed bone and bits of metal were removed there was invariably dramatic relief of headaches.

In one case a man was shot across the junction of the lateral and longitudinal sinuses. We were in trepidation to know what would happen when we trephined down. There was no hæmorrhage, and relief came from removal of bits of bone and metal.

Cases that Captain Owen had were very interesting. A man had a skull wound completely healed over, but suffered from persistent headache. There

[1] Communicated to a meeting of the Victorian Branch of the British Medical Association on March 1, 1916.

was a depression. This case was trephined. On the piece of bone being removed a spicule of bone, running into the brain substance, was found, and a teaspoonful of pus was removed. The man improved greatly and rapidly. The next commonest injuries were nerve injuries, and these were very perplexing. One had to rely on a skilled neurologist for investigation. We had surprises. After finding an arm completely paralysed, and where there was evidence of grave damage to the brachial plexus, with a wound of entrance and exit, one felt certain there had been destruction of nerve tissues, yet we frequently found there was no division of the nerves, the nerves not even being surrounded by scar tissue. When a bullet was traversing soft tissues with extremely high velocity there were radiating stresses transmitted from tissues to tissues surrounding, and there was nerve shock at that spot. Possibly this was analogous to cases of persons being blind from shell shock. The question was whether one should wait for a time before interfering, or operate as soon as the wound had healed, and it was safe to do so. The neurologist's opinion was that when there was non-conductivity of nerve impulses the sooner we interfered the better. There were perplexing times when we were in doubt as to what we should do; when a considerable length of nerve was shot away; when suturing was impossible, as so much of the nerve had been destroyed, and the ends could not be brought together. It would be interesting to watch these nerve cases afterwards. I trust that records will be kept by medical men who can watch those of the men who are in country towns.

We had a number of bullets to remove in difficult positions. In one case which we saw, three operations were performed before the bullet was discovered, and then it was found inside the ischium. The X-ray man came time after time, and said that the bullet was where it actually was found. In one case a man was shot through the pelvis, and the bullet was shown in the region of the obturator foramen. On taking localizing measurements it was found that it probably was in that situation. The next thing to do was to take a stereoscopic picture from the back and front, and it was located in the notch where the nerve comes through. London surgeons were always willing to help us in every way. Through Sir Alfred Pearce Gould I was able to secure access to a cadaver, and was then able to get on to the spot where the bullet was with as little mutilation as possible.

It was not recognized before that sepsis could remain latent under the skin in apparently healthy tissues. Evidence accumulated that this frequently was so, and that it was not the fault of the surgeon. Septic conditions could remain deeply in tissues. Bullets might be removed, and intense cellulitis be set up round the spot afterwards.

In one case a man had 2½ inches of the tibia shot away. After being kept in position for a long time the gap filled in with soft tissues, and the wound had healed firmly for over four months; I thought it was safe to transplant healthy tibia into the gap. After cutting back the flap there was found purulent material, and the depths of the wound were septic. There was another peculiar circumstance. I had 60 prisoners returned from a camp in Germany. There was evidence of much good surgery, amputations with good stumps by German surgeons, and amputations by the circular method. A great number had shell injuries to the bone, which had occurred many months before, but on the slightest interference erysipelas started. These men had been five to twelve months in the camp. One had bits of the femur protruding through granulations. The pieces were removed; he got erysipelas. A clean granulated stump was washed with saline, and skin grafts laid on it; that man got erysipelas at once. Another had a small piece of bone sticking up through the flesh at the back of the leg; he was given an anæsthetic, and the bone pulled out; he at once got erysipelas. Why the sepsis should remain so long I do not understand.

It is a good thing to have an artificial limb made where numbers of men are together, as occurs at Roehampton. Patients read what the makers claim—that a man with their artificial arm can write his name—and when the patients get theirs they find that they are not all that was expected. They read also what the illustrated papers say can be done with artificial legs. At Roehampton there are 360 beds for patients who have lost arms and legs. If a patient, who is to have an artificial arm, sees just how well or ill his friend has got on with his artificial arm, he knows what to expect. He does not expect too much at first, and is prepared for the initial disabilities.

REMARKS ON WAR EXPERIENCE.[1]

By **B. T. Zwar, M.D., Ch.M. (Melb.),**
Major, A.A.M.C., A.I.F., Melbourne.

With the opening of the Gallipoli campaign our hospital—the second Australian Stationary Hospital—received orders to proceed to the Dardanelles. There its personnel was detailed to take charge of certain of the transports and to convert these into temporary hospital ships for the reception and transport of wounded. The conversion of these transports was associated with considerable difficulty. They had been crowded with troops for several weeks. Many of them had been carrying mules and horses, and still had these on board, and it was impossible to get them off. There was rarely time to clean the boat or troop decks effectively before wounded were brought aboard; in some cases a large number of wounded, urgently requiring attention, were already aboard when the medical unit placed in charge arrived. These transports received their wounded lying at anchor some two miles from the beach. The wounded were brought alongside in boats, towed by motor pinnaces; those that were able would walk aboard, whilst cot cases were placed in a cradle and raised aboard by means of a derrick.

Our plan was to arrange for the accommodation of the seriously wounded already aboard on the boat deck, being the cleanest and most readily

[1] Communicated to a meeting of the Victorian Branch of the British Medical Association on March 1, 1916.

cleaned part of the ship. A portion of the deck was partitioned off as an operating theatre, and the rest laid out with mattresses. A space was similarly partitioned off on the promenade deck as a dressing station for the treatment of the less severely wounded. Whilst wounded were thus being received on deck, a ship's party was taking down the forms and mess tables on the troop decks, and thoroughly cleansing these decks with a phenyle solution. On each deck a convenient portion was screened off as an operating theatre to hold two tables, fitted with electric lights and tables for sterilizing, etc. As soon as one of these troop decks reached its full complement of wounded one table would be transferred to the next deck to receive wounded, whilst the other remained until all the wounded had been attended to. Provision was made for a constant supply of warm fluid nourishment. Our personnel consisted of 3 officers and 35 orderlies. On H.M.T. ——— we assisted the other section of our unit on H.M.T. ———. We worked in conjunction with an I.M.S. unit on H.M.T. ———. We took on 791 wounded in just under 70 hours, and all the necessary operations were completed by the time we received orders to leave, about 18 hours after we had ceased taking on wounded. This would have been impossible had we not had the assistance of Colonel Ryan and a number of fleet surgeons, who worked with us day and night. The help of these fleet surgeons, and the way in which it was proffered, was truly magnificent. I shall never forget the offer of the fleet surgeon of H.M.S. ———. "We come to help you; we do not mind whether it is to operate, to do a dressing, or to hold a limb, so long as we can help you." The time between Gallipoli and Alexandria—two to two and a half days—was fully occupied with renewal of dressings and other attention required by the wounded.

As regards the wounded, their extraordinary state of mental exaltation was most impressive. Notwithstanding most severe wounds, they would converse, and ask to go back to the trenches in a way that was quite uncanny. Their wounds had received attention ashore, but during the periods of heavy fighting it was obviously impossible to attend to large ragged and badly soiled wounds, particularly in the case of cranial ones; dirt, blood, hair, and brain matter were caked together, and the wounds were most difficult to clean. Where a bullet in its course had struck compact bone, it had frequently led to tremendous comminution, with extensive laceration of the deeper tissues and a large ragged exit wound; this was particularly noticeable in wounds of the carpus and tarsus and of the ribs. Bullets whose velocity had been more or less spent would, however, be deflected by such tissues as cartilage, or even a fascial plane. I saw two wounds of the abdominal wall with entrance wound on one side anteriorily, and exist on the other side posteriorily, and yet the bullet tracks had been extraperitoneal along the fascial planes in the whole of their course.

During a part of my stay in England I was attached to Australian Auxiliary Hospital at Harefield, and among the cases that came under my care there were several patients who were suffering from some nerve lesion or other; they could be divided into three classes: The first class included those cases in which there was a gross direct injury to a nerve trunk or trunks, a portion being completely destroyed, and ends being densely adherent to adjoining tissues. In these the amount of scar tissue found at and in the neighbourhood of the seat of injury was always considerably more than was expected from the appearance of the scar that marked the entrance and exit wound of the bullet. This excessive scarring was generally due to the organization of blood effused from adjoining damaged vessels. The second class consisted of cases where the nerve was compressed by bone, callus, metal or, as was fairly common, by a collar of fibrous tissue resulting from the occurrence of hæmorrhage along the nerve plane and the subsequent organization of the blood clot. Those of the third class presented symptoms, motor, sensory and trophic; faradic stimulation did not yield any response. On exposure, however, the nerve in question was found to be intact, and the bullet track was clear of it. In this class the nerve as a rule was somewhat thinner, and more fibrous in appearance and to the touch.

There has been some difference of professional opinion as to when operation for nerve repair, or for the relief of nerve compression, should be resorted to. Whilst it is essential that conditions must allow of an aseptic course of repair, and that all wounds must therefore be completely healed, it would seem that once these conditions obtain, the sooner repair is carried out the better should be the chance of recovery. Delay sufficiently long will allow the paralysed muscles to undergo complete degeneration, and then recovery of contractility is impossible. The shorter the delay the less marked will be the changes in this direction. The greater the delay, moreover, the more fibrous will the distal end of the nerve become, and the more unfavourable for the down-growth of the new axis cylinders.

In concluding I would like to refer to a point of some importance to recruiting officers, namely, that it has been the experience of the medical officers in the fighting zone that it is, as a rule, not worth while to send men recently recovered from an operation for hernia, appendicitis, varicose veins, or internal derangement of the knee-joint, into the firing line.

Reviews.

INFANT FEEDING.

Professor Roger Dennett gives a very good description of a simplified method of feeding infants, in a book entitled "Simplified Infant Feeding."[1] He endeavours to show that an infant can be fed on milk, water, sugar and salts in varying proportions, without disturbing the caloric value of the diet. The mixture can be boiled or not before being given.

The author has evidently spent much honest labour on working out his system. If it is found in practice that all

[1] Simplified Infant Feeding, by Roger H. Dennett, B.S., M.D., 1915. Philadelphia and London: J. B. Lippincott Company; Cr. 4to, pp. 355, illustrated. Price, 12s. 6d. nett.

that is needed in the correct feeding of infants is to give these ingredients in the relative proportions indicated, we may hope to attain something approaching methematical exactitude. He finds that sugar can take the place of fat, and has consequently discontinued the use of cream and whey. No one, he says, would feed a child on more than 4% of fat, and yet some infants thrive on strippings. This shows that a baby's digestive powers are very wide. He maintains that sugar is the primary cause of indigestion in infants, and states that in two-thirds of all cases of diarrhœa the cause was found to be a digestive fault, which can usually be remedied by dealing with the sugars. Protein indigestion can be overcome by boiling the milk, which renders the curd thin and easily digestible. When boiled milk is used for a considerable length of time, he gives orange juice with it.

He emphasizes the need of a specially supervised milk for infants, containing not more than 10,000 bacteria per cubic centimetre. He regards the quality of the germ in milk as more important than the quantity.

He divides diarrhœal conditions into classes, and has four different methods of dealing with them. These methods are dietetic. From the descriptions of the illustrative cases, it would appear that he has not made any special bacteriological study in these cases. He does not discuss the subject of temperature in connexion with epidemic diarrhœa. Perhaps New York has such a good supply of infant milk in the summer that the severe and fatal cases of milk poisoning met with in Australia do not occur.

Throughout the book he urges the practitioner to give the mother detailed written instructions. He classifies babies into (*i.*) fat, (*ii.*) average, and (*iii.*) emaciated, and assigns to each class a certain number of necessary calories, calculated in accordance with the weight of the baby. The caloric values of the essentials of the food are then calculated, and the food for 24 hours made up. This quantity is then divided into a certain number of bottles containing a given number of ounces. The baby has to take the whole feed. If it does not, either the baby or the doctor is wrong, and the quantity or the quality of the feed has to be altered. He gives nine instances in which caloric feeding cannot be used. At the end of the volume he appends a table, giving the chemical analyses and caloric values of a number of patent foods. He evidently does not use any of them. His system contains new ideas, and is practical and concise. If it proves to be as successful as he claims, it should have many followers.

THE PREVENTION OF ENTERIC FEVER.

The report on enteric fever of the Federal Departmental Committee entrusted with the study of the causes of death and invalidity within the Commonwealth consists of a general report, in which certain recommendations are included, and an appendix containing the data on which the main report is based.

The Committee recommend that the various authorities should be urged to engage trained observers for the purpose of carrying out epidemiological and bacteriological investigations in connexion with localized epidemics of enteric fever. This research should be undertaken for the purpose of clearing up some points still requiring elucidation. The Committee have reason to assert that a reduction in the mortality of the disease has been produced by the introduction of measures of sanitation, more especially the controlled disposal of human excreta. Notwithstanding this fact, there still remains a considerable number of deaths from this cause. They attribute this residual mortality to the defective or incomplete application of the recognized principles of sanitation, and to the spread of the disease by infected human beings, including both actual sufferers and carriers. They state that improved machinery for obtaining knowledge of the existence of cases of enteric fever, more extensive hospital accommodation and the early discovery of carriers, would yield a better control over the human sources of the disease. They therefore recommend the following steps:—

(i.) Existing defects in sanitation should be sought for and rectified when found, and water-carried systems of sewage disposal be adopted as widely as possible.

(ii.) Improvements in the means available for the early notification of enteric fever should be introduced.

(iii.) The bacteriological examination of the excreta from all patients before release from treatment and control should be carried out.

(iv.) There should be notification of carriers by the hospital authorities, and the institution of means for (*a*) instructing carriers in regard to the precautions required to render them safe members of the community, (*b*) prohibiting carriers from engaging in any occupation involving the handling of foodstuffs, and (*c*) supervising and carrying out periodical bacteriological examination of carriers. The Committee are of opinion that compensation might be paid in certain cases.

(v.) A system of surveillance over those in the vicinity of a typhoid patient should be instituted, to detect the commencement of the carrier state and the initial symptoms of the disease.

(vi.) The amount and distribution of the available hospital accommodation for persons suffering from enteric fever should be reviewed for each locality, with the object of determining its adequacy.

(vii.) Small transportable hospitals should be kept in readiness for use in emergency in localized outbreaks.

(viii.) Further scientific investigation is required in regard to the following points:—

- (*a*) The factors contributing to a fall in mortality from the disease; those contributing to the persistence of the disease; and those associated with exacerbations.
- (*b*) The interdependence between climate and the incidence of enteric fever and between climate and the infectivity of carriers.
- (*c*) Atypical forms of the disease among children.
- (*d*) The prevalence of paratyphoid fever in Australia and its characteristics.
- (*e*) The rôle played by flies and other intermediaries in the dissemination of the disease in Australia.
- (*f*) The degree of infectiousness of carriers, and the possibility of combating the condition.
- (*g*) The various systems of the disposal of excreta in non-sewered areas.
- (*h*) Methods of standardization.

The Committee conclude their report with a reference to the risk attending the return of men who have suffered from paratyphoid fever while on active service abroad.

A fuller understanding of the position taken up by the Committee in putting forward these recommendations is gathered from the appendix. Unfortunately, the document is too long to be reproduced in this place. The first point dealt with is the incidence of enteric fever in the Commonwealth. It is shown statistically that, while there has been a definite decline in the death-rate from this disease, the decade 1905-1914 has been characterized by a slowing down of this decline. It appears that recrudescences of epidemic form have appeared every four or five years. The evidence available does not suffice to demonstrate any coincidence between the variations in the mortality figures and variations in climatic conditions. Similarly, there is no definite information which would justify the deduction that the reduction in the number of susceptible persons has contributed materially to the decline in the death-rate. On the other hand, the Committee adduce a number of arguments in favour of the assumption that a better system of the disposal of the excretions from persons suffering from enteric fever has led to a reduction in the death-rate. The statistics of Melbourne, of the extra-metropolitan districts and of the whole State of Victoria are utilized to show that, while the mortality in the area with the most complete sewerage system has fallen most markedly, there is a level below which the number of deaths is not depressed by these means. The figures for Sydney and New South Wales are said to lead to the same conclusion, but are not quoted. Evidence is available to prove that the dissemination of the typhoid bacillus is dependent on external conditions. Some of these conditions have been studied in this connexion. It has been found, at all events as far as New South Wales is concerned, that the infection of public water supplies has not been an important factor. On the other hand, it

would seem as if direct infection from the sick-room or indirect infection through the excretions is a factor of great importance. The Committee have collected some evidence which might be expected to throw light on the causation of the disease in the so-called "unexplained residue of typhoid prevalence." Having disposed of water as a frequent source of infection, they turn their consideration to the much-discussed problem of the house-fly. Some facts are known in regard to infection by flies, but the Committee show that this knowledge is experimental, and that there is no positive evidence that flies play a large part in the dissemination of the disease. It has been demonstrated that a fly can be infected artificially, and also that it harbours *bacillus typhosus* after settling on the fæces of patients with enteric fever. They admit the advisability of destroying flies under all conditions, but claim that the assumption that enteric fever is a fly-borne disease had not been demonstrated. Infection by dust is unlikely, and infection by clothing cannot be common. Infection by the handling of foods has been demonstrated on frequent occasions.

A closer consideration of infection by means of a person harbouring typhoid bacilli is contained in the second part of the appendix. The data available in regard to the frequency of typhoid carriers is summarized, and some attempt is made to ascertain from previous observations the relative frequency of infection from persons suffering the disease and infection from carriers. Although the figures and observations quoted do not lead to very definite results it appears to the Committee that it is justifiable to press for the routine examination of the excreta of persons convalescent from enteric fever, in order that carriers may be detected before they regain their freedom and intermingle with the general population. The frequency of carriers is assumed to be approximately 0.3%, and the frequency of persons who retain the infective agent after an attack is estimated at something between 1% and 11.6%. Further, they quote from various sources to show that infection is attributed to carriers in less than 20%. The possibility of chronic carriers arising among those who have not had a previous attack of the disease is discussed, as is the possibility of tracing carriers in the general population. It is recognized that the only means of detecting these carriers is accidental, by tracing an epidemic to one. The Committee therefore assume that an attempt to catch carriers during the stage of convalescence of enteric fever is more likely to lead to tangible results.

Public Health.

THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending April 15, 1916:—

	Metropolitan Combined Districts.		Hunter River Combined Districts.		Remainder of State.		Total.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Enteric Fever ..	17	2	3	0	37	4	57	6
Scarlatina	39	0	7	0	77	2	123	2
Diphtheria	80	1	13	0	101	0	194	1
C'bro-Sp'l Menin.	2	4	0	0	4	0	6	4
Infantile Paralysis	13	1	0	0	4	0	17	1
Pul. Tuberculosis	20	2	0	0	0	0	20	2

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending April 16, 1916:—

	Metropolitan.		Rest of State.		Total.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Diphtheria	88	4	50	1	138	5
Scarlatina	18	1	10	0	28	1
Enteric Fever	9	0	22	1	31	1
Pulmonary Tuberculosis	20	5	5	4	25	9
C'bro-Spinal Meningitis	3	—	4	—	7	—
Infantile Paralysis ..	4	—	2	—	6	—

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending April 15, 1916:—

Disease.	No. of Cases.
Varicella	1
Diphtheria	19
Enteric Fever	38
Pulmonary Tuberculosis	8
Cerebro-Spinal Meningitis	4
Erysipelas	2
Scarlatina	5
Malaria	1

INFECTIVE DISEASES IN WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the week ending April 8, 1916:—

Disease.	Perth. Cases.	Fremantle. Cases.	Rest of State. Cases.	Total. Cases.
Enteric Fever	1	0	3	4
Diphtheria	4	0	3	7
Scarlatina	0	0	3	3
Pulmonary Tuberculosis	0	2	2	4
Infantile Paralysis ..	1	0	0	1
Puerperal Fever	1	0	0	1
Erysipelas	0	0	1	1

QUARANTINE SERVICE REPORTS.

The report of the Department of Quarantine regarding quarantinable diseases issued on April 14, 1916, contains the following information:—

Variola.

During the fortnight ending April 13, 1916, there were seven cases of small-pox, all within the Newcastle area (New South Wales).

On April 6, 1916, the s.s. *Clan Maccorquodale* arrived in Sydney from Marseilles. On board there was a member of the crew who was suffering from confluent small-pox. This man had joined the ship at Colombo. The patient, crew and one passenger were landed at the North Head Quarantine Station. Vaccination and disinfection measures were carried out.

In the Dutch East Indies 193 additional cases and 109 deaths from variola have been reported.

In the Straits Settlements there were 16 cases and six deaths during the first 28 days of February, 1916.

Fifteen deaths were reported at Rangoon during the week ending March 2 in Burma.

The Bill of Health issued in Hong Kong includes the report of nine cases and six deaths. A Bill of Health issued at Bombay contains reference to small-pox in epidemic form in the port and environs. In the Philippine Islands 10 cases of varioloid were reported between February 12 and March 10, 1916.

Plague.

From January 30, 1916, to March 4, 1916, there were 47,884 cases of plague in India, with 33,006 deaths.

In Java there were 324 cases of plague with 317 deaths, between January 15 and February 11, 1916.

In Burma, according to the Bill of Health issued at Rangoon, there were 80 deaths between March 2 and March 8, 1916.

The number of cases reported in Egypt from February 4 to February 17, 1916, was 23. There were 16 deaths in this period.

In Ceylon there were 18 cases from January 30 and March 4, 1916.

In the Orange Free State, South Africa, 14 cases occurred between February 8 and March 5, 1916, and eight deaths.

Two cases were detected in Mauritius during the period from January 12 and February 10, 1916.

No other cases have been reported elsewhere.

Cholera.

In Burma there were two fatal cases of cholera during the week ending March 2, 1916. There were six cases in the Philippine Islands between February 12 and March 10, 1916, and one death.

Dr. Alfred Paul of the Lewisham Hospital, Sydney, and Dr. Arthur J. M. Fargie, of Wentworth, have been nominated for membership of the New South Wales Branch of the British Medical Association.

The Medical Journal of Australia.

SATURDAY, APRIL 29, 1916.

Preventive Medicine.

The recommendations of the Committee appointed by the Department of Trade and Customs to enquire into the causes of death and invalidity in the Commonwealth in respect to the enteric fever question may be summarized very briefly. Bacteriological investigation, adequate hospital accommodation for all typhoid patients, and handcuffs for carriers. Incidentally, sanitary systems are to be improved, both in urban and rural districts, and the preparation of foodstuffs is to be conducted under more hygienic lines, in order that contamination may be excluded. All these propositions must commend themselves to the hygienist, and the public may congratulate themselves that preventive medicine is to be practised, on paper at least. Unfortunately, this Committee has been appointed to investigate and report, and not to act. Whether any of these recommendations will be adopted remains to be seen. While the advice contained in the report can be commended, some discussion may not be out of place in regard to the main evidence contained in the appendix to the report. It is a self-evident proposition that neglect in sanitary control must spell disaster in regard to enteric fever. The disposal of sewage must be an important factor in the struggle against the infection. Theoretically speaking, an adequate water-carried system of sewage disposal should suffice to solve the problem of the prevention of the disease. The figures on which the members of the Committee base their contention that the introduction of effective sewerage is followed by a marked improvement in the enteric fever mortality are quite striking; but, unfortunately, statistics are not always to be relied on. It may be pointed out that the corresponding figures for Sydney have not been given. These figures would not teach the same lesson. Further, the death-rates are quoted exclusively. More information can be gleaned from case incidence, and the larger numbers are less liable to error than the smaller. Even if the Victorian figures of death-rates were sufficient for the purpose, the decline is not necessarily significant of the effect of the introduction of a good sewerage system. It is highly probable that the conclusions of the members of the Committee are correct, but further investigations and the collation of more of the available evidence is required to prove it.

The second point, which is worthy of comment, is in connexion with the spread of enteric fever along small water-courses, creeks and dams. The Committee finds that proof is lacking that the infection in Australian outbreaks has been traced to this source. Further investigation, however, will show that this method of spread has been observed in the Commonwealth. It could hardly be otherwise. While enteric fever abounds in country districts, small water-courses must become infected, and, for a time, the water in the lower reaches is capable of giving rise to fresh infection. The position taken up by the Committee in regard to flies is the only one tenable while our knowledge remains at its present level. The danger of the spread of infection through the handling of foods by infected persons is mentioned, but we venture to suggest that more emphasis might have been laid on this point.

The Committee have met with great difficulty in handling the carrier question. While we are forced to admit that Ledingham and Arkwright have estimated that three persons in every 1,000 of the community harbour typhoid bacilli, the evidence on which this assumption has been built up is slender, and, were it true, the enteric fever problem would be well-nigh insoluble, since there would be 15,000 carriers in Australia constantly. Until it is proved to the contrary, it must be assumed that a relatively small proportion of persons, who have suffered from the disease develope into chronic carriers. If statistics are of use, figures showing the probable incidence of chronic carriers should be of great value. The annual incidence of enteric fever among the community is known. In the State of New South Wales during the decade 1905-1914, enteric fever was notified in 22,756 instances. This would mean that in this period the average number of recognized cases of this disease was 2,275. In the same State,

the average age of persons at the time of their death during the year 1914 was 40.85 years. It would therefore seem as if 55 persons in every 1,000 of the population contracted enteric fever at some time during their lives. But since nearly 5,000 out of the total number of deaths (*i.e.*, 18,777) were of children under five years of age, among whom enteric fever is rare, or rather rarely diagnosed, it would be justifiable to assume that the incidence of enteric fever in the population would not exceed 4.5%. It has been estimated that approximately 3.3% of convalescent fever patients ultimately become chronic carriers. Disregarding the fatal cases altogether, we should arrive at the result that 0.15% of the community were carriers. We do not put these figures forward as an accurate calculation. They are merely intended as a very rough guide, erring by overstatement, to support our doubt whether Ledingham is justified in assuming that 0.3% of the community in England represents the proportion of typhoid bacillus carriers. We hope that the stimulus given by the Committee will set investigators working to ascertain the approximate frequency of the carrier state in the Commonwealth. The report of the Committee is a very valuable document, full of suggestions, and calculated to lead hygienists to probe more deeply into the unexplored by-ways of this uncanny disease.

FRIENDLY SOCIETIES IN WELLINGTON, NEW ZEALAND.

In December last we recorded in brief the history of the trouble between the practitioners of Wellington, New Zealand, and the Friendly Society Lodges. The disagreement arose out of a claim made by the doctors for a reasonable rate of remuneration. The result of the refusal of the doctors to attend Lodge patients at the old rates has been that the Lodges have been without medical practitioners. A deputation of the representatives of the Friendly Societies in Wellington waited on the Minister of Health and the Minister in charge of the Friendly Societies on April 4, 1916, for the purpose of seeking assistance in regard to this matter. The Friendly Societies' representatives suggested the expedient of importing doctors from America to ease a very acute position. It will be remembered that a short time ago the Minister, in reply to a question asked in Parliament, did not hold out great hopes of success to American practitioners seeking registration within the Dominion. In the current issue will be found a summary of the conditions of registration in the six States of Australia and in New Zealand, and from this summary it will be seen that unless the 1914 Act be amended most drastically, "no Americans need apply." The sympathy which the Minister is stated to have extended to the members of the deputation reminds us of the walrus's tears. His reply was guarded, but we presume that the Friendly Societies will realize that the argument used was analogous to the proverbial "If 'ifs' and 'ands' were pots and pans." He stated that any medical men, who were eligible for registration in the United Kingdom, were eligible for registration in New Zealand. If his efforts to deal with the trouble proved ineffective, he would submit proposals to the Cabinet that would enable him to deal with the matter. Had the Minister been quite frank, he would have told the members of the deputation that there may be various ways to temporize, but that the only way to provide their members with satisfactory medical attendance is to pay a reasonable capitation fee to their doctors. We cannot believe that there is any danger that undesirable practitioners will be imported into New Zealand. The times demand that the conditions of medical registration should be stiffened all round, in order that we may be secure from outsiders whom we do not want.

THE INFANTS' FOOD QUESTION.

The Board of Health of Victoria have issued the regulations and standards for food and drugs under the powers conferred on it by the Health Acts. These regulations bear the date of April 12, 1916. A special section is devoted to infants' foods, and consists in a definition, instructions in regard to the labelling of the foods and certain restrictions. These new regulations do not differ essentially from those contained in the documents existing in other States. An infants' food is defined as a food described or sold as an article of food suitable for infants. It is not to contain any woody fibre, nor any mineral substance insoluble in acid, nor any preservative. All foods which, when prepared as directed, contain more than 1% of starch or do not conform approximately in proportional composition to human milk, must bear a bold, legible label, that it is not to be given to infants under the age of six months, except

under medical direction. It is specified that the foods must contain approximately the same proportional quantity of protein, fat and lactose as human milk.

The object of food standards and regulations is to prevent the sale of noxious substances for human consumption, and to safeguard the public from incorrect labelling, so that when any article is bought, the purchaser may acquire the article he requires. It is obvious that the prohibition of insoluble or harmful ingredients in infants' foods is very desirable, but the authority should not impose restrictions to the sale of foods which in practice have proved to be of value. The attempt to set up a standard for proteins, fat and sugar on the basis of the equivalent content of human milk is impracticable, unless the authority is prepared to recognize that the variations of these constituents in mother's milk are much wider than are usually held. The investigations of Dr. Wardlaw and Dr. Chapman (see *The Medical Journal of Australia*, October 9, 1915, p. 352) demonstrate that the variations are so wide as to be useless for the purpose of standardizing. The regulations of the Victorian Board of Health, however, do not define the normal proportions of the protein, fat and sugar in human milk.

IVAN PETROVITCH PAVLOV.

Since the death of Dimitri Mendeleef, in 1907, Professor Pavlov has been regarded as the most distinguished of Russian scientists. The announcement that he died at Petrograd on February 12, 1916, will occasion profound regret in all interested in the advancement of human knowledge. For many years Ivan Petrovitch Pavlov has been Director of the Physiological Department of the Institute of Experimental Medicine in the Imperial Military Academy of Medicine of Petrograd. There he organized the laboratory, collected the company of investigators, devised and tested the methods and expounded the results that gained for him a Nobel Prize and the proud position of the foremost physiologist of his age.

The work of the digestive glands formed the subject of the researches which were undertaken. By the adaptation of every part to its special task, the alimentary system prepares all kinds of foods for their absorption into the fluids of the body and for their use in the maintenance of the processes of life. The reagents of glandular origin were studied by new methods. These reagents were obtainable at all times. They were collected in an absolutely pure condition, so that analysis of their composition became possible. Their quantity was estimated with accuracy. Most important of all, they were examined while the digestive canal performed its functions in a normal manner, and while the animal under experiment was in perfect health. The foundation of this series of observations was laid in an investigation on the juice poured from pancreatic fistulæ. In this research the surgical skill which Pavlov so ably exercised in his later work was demonstrated in the preparation of permanent fistulæ. The experimental methods that he devised were only possible with the aid of strict asepsis and surgical dexterity. The animals that served for observations were subjected to such surgical interference as to provide for the collection and examination of the digestive juices The investigations were not made until months, in some cases years, had elapsed since they were prepared for observation. In consequence, Pavlov was in a position to obtain information of a different character to that formerly ascertained. In the first place, he proved that the amounts of the various digestive juices were proportional to the amounts of food administered. In the second place, he found that the nature of the food conditioned the composition of the digestive reagent. This dependence was clearly shown in the kinds of gastric juice secreted in response to the ingestion of bread, meat and milk. Thirdly, he pointed out the ways in which each kind of gastric juice was adapted for the digestion of the food that invoked its secretion. These facts have led to a new conception of the mechanism of secretion and of the process of digestion Other experiments shed light on the manner in which the secretion was evoked. The proof of the presence of secretory nerve-fibres in the pneumogastric nerve in connexion with the fundal glands of the stomach revealed exceptional skill in coping with difficulties.

The application of new methods to the study of the salivary secretion produced even more important generalizations. After ten years of patient and laborious observation, Pavlov outlined at the Physiological Congress in 1913 the results which furnished data for the analysis of reflex action and the evolution of nervous functions. A new reflex could be established by the association of a second afferent impulse with that which elicited the particular efferent response studied. When the association had been confirmed through repetition, the efferent response followed the second afferent impulse without the concurrent stimulation of the afferent stimulus which already evoked the reflex. In this way numerous reflexes were initiated. It thus became possible to offer an explanation of the mode of extension of reflexes in the evolution of the individual. As the growing animal extends its functions, its nervous system exhibits manifestations of activity which are more numerous as development proceeds. The excitants of the sensory nerves, which are introduced, in increased variety, into the life of the animal with advancing age, are utilized to stimulate its bodily activities. These results appear destined to be of great service throughout the whole domain of physiology.

Pavlov will be numbered with Vesalius, Harvey, Malpighi and Pasteur, among those whose memories are venerated as founders of the Institutes of Medicine. Mendeleef's Principles of Chemistry have been read wherever the study of chemistry has been undertaken. The writings of Pavlov have received the same attention.

We learn with regret from the *Brisbane Courier* of April 19, 1916, that Lieutenant Harold St. G. Turner, younger son of the Honourable Dr. W. F. Taylor, died on April 15, 1916, from the results of a fall from his horse while acting as transport officer to the Border Regiment. Dr. Taylor received a cable from Buckingham Palace, expressing Their Majesties' sympathy.

Abstracts from Current Medical Literature.

OPHTHALMOLOGY.

(155) Torticollis Relieved by Tenotomy of the Inferior Oblique.

Duane, of New York, relates a case of a child of 3¾ years, who had from the age of four months a habit of tilting her head to the right shoulder (*Archives of Ophthalmology*, January, 1916). At the age of two years, when the head was straightened by means of a brace, it was noticed that the left eye deviated up, and the mother discovered that when the left eye was bandaged the head was held straight. Examination with the head tilted and turned to the right revealed left hyperphoria of 10°; when the head was held straight the left hyperphoria was 20°. Diagnogis.—Congenital insufficiency of the right superior rectus; fixation with the paretic eye; sharp secondary deviation upwards of the left eye. Tilting of head to bring vertically displaced images more on a level. Operation.—Complete tenotomy of the left inferior oblique at its origin. Result.—Only a few degrees of left hyperphoria by screen test; head nearly straight. The author had already pointed out the main indications for tenotomy of the inferior oblique. They are, first, paralysis of the superior rectus, congenital or traumatic, with fixation with the paretic eye, and consequent secondary deviation of the inferior oblique in the opposite eye; and, second, paralysis of the superior oblique, with secondary deviation of the inferior oblique in the same eye. The former is not infrequent as a congenital anomaly; the author has seen about 40 cases. In performing the tenotomy, the incision is made at the intersection of the lower orbital margin with a perpendicular dropped from the supra-orbital notch. When head tilting fails to give relief, the patient may adopt the expedient of diverging or convexing the eyes, until the images are so far apart as not to be confusing. A fair proportion of lateral squints have developed in this way. In this case the condition was mistaken for a true torticollis.

(156) Brawny Scleritis.

Under the name, massive granuloma of the sclera, George S. Derby reports an unusual case of this disease (*Archives of Ophthalmology*, January, 1916). It has been renamed annular scleritis by Parsons, and about 100 cases have been reported altogether. It usually appears as a gelatinous, brownish-red infiltration of the conjunctiva, episclera and sclera, most marked close to the limbus. There is dilatation of blood vessels and lymphatics, and the pain and tenderness are acute. The cornea becomes opaque, the uvea is affected by the process, and the sight is lost. The changes are sometimes most marked in the posterior half, and the diagnosis may only be made after enucleation. Commonly one eye only is affected, but in three cases both eyes were lost, and in two more the second eye was mildly affected. Gout, tubercle and syphilis have all been claimed as the causal agent, but the truth is still undetermined. The most frequent age is between 60 and 80 years. The patient was a female teacher, single, and 34 years of age. She had had inflammation in the right eye (scleritis) five years and again 2½ years previously, and ever since. Diagnostic injections of T.O. gave a negative result. After some months a retinal detachment was noticed, with faulty transillumination; a diagnosis of probable tumour was made and the eye enucleated The diagnosis of brawny scleritis was then evident, and the patient was examined for uric acid and by the Wassermann test. Results for both were negative. On examination the globe measured 30 mm. × 26 mm. × 26 mm., the abnormal size being due to enormous thickness of the sclera, which was 13 mm. over an ill-defined nodule about 20 mm. in diameter. The ciliary body and choroid were also greatly thickened. Microscopically, the bundles of the sclera were found to be split apart by granulation tissue densely infiltrated with cells. A marked feature was obliterative endarteritis. In this case the area of necrosis was small compared to that described in other and older cases. The examination furnished no conclusive evidence as to the cause.

(157) Examination of the Spinal Fluid in Affections of the Eye.

According to James B. Ayer, the more careful differentiation by means of the examination of the spinal fluid of types of inflammatory and degenerative diseases of the nervous system is required (*Archives of Ophthalmology*, January, 1916). Light is thrown upon doubtful cases, such as in slightly unequal pupils with sluggish reaction, in early diplopia, in suspected atrophy and in certain forms of headache, epilepsy and migraine. In all, 160 cases were examined, of which 40 were examples of external ocular palsies. In 11 of these the tests were of prime importance in the diagnosis of tabes. All except five showed evidence of meningeal irritation, by the increase in the number of cells per cubic centimetre, by the increased proteins, by a positive Wassermann reaction, or by a gold chloride test. In 40 cases of primary optic atrophy, only 12 had normal spinal fluid. In some of these the atrophy was shown to be due to tobacco, lead or cerebral tumour. The author regards well-marked choked disc as a contra-indication to lumbar puncture, unless there is some very good indication. In 13 cases the Argyll-Robertson pupil was the sole sign, and of these nine gave the positive tests for syphilis, while four were negative. These are probable cases of arrested nerve syphilis. The importance of the tests in such cases is to determine the stage of the disease, whether it is active and advancing or stationary and degenerative only, or dead and quiescent. In one case treatment may arrest the disease; in others there is no need of intensive anti-syphilitic medication.

(158) Visual Field in Glaucoma.

W. Tohlein draws attention to Bjerrum and Ronne's work on the visual field in glaucoma (*Archives of Ophthalmology*, January, 1916). Bjerrum found in a large percentage of cases an arcuate or annular scotoma, starting from the blind spot and surrounding the point of fixation. This he believed was caused by the destruction of certain bundles of nerve fibres, which, passing from the upper or lower margin of the papilla, described an arc about the macula. His conclusions were supported by Ronne. The present author, while confirming these observations, considers that their value for the differential diagnosis of glaucoma has been exaggerated. In the first place, there are cases in which the visional field symptoms of Bjerrum and Ronne are absent, and there are non-glaucomatous cases in which they are present, such as in closure of a retinal artery and in various diseases of the optic nerve. Even Ronne himself has shown that these fields occur sometimes in optic atrophy. It is difficult to explain why increased pressure should select the upper and lower bundle of nerve fibres for its pressure.

(159) Superficial Linear Keratitis.

Holmes Spicer and Affeck Greeves regard superficial linear keratitis as a rare condition (*Ophthalmoscope*, March, 1916). The cases may be divided into two groups; those in the first group recover and do not recur; those in the second group are subject to a series of relapses for years, leading to loss of sight. There is sudden onset, with pain and congestion of the eye, and the appearance of a number of superficial ridges of epithelium in the cornea, vertical in arrangement, gray in colour, with tapering ends not reaching to the limbus. In the ridges are denser points, like nodes at fairly regular intervals, which stain with fluorescein. No iritis or corneal precipitates are present. There is usually a fall in ocular tension and great diminution of vision. If there is no recurrence, the cornea clears up, but repeated attacks render it opaque. Pain varies, but is often considerable, and there is no anæsthesia of the cornea, though some patients complain of a numbness of the eye before an attack. Treatment must be on general lines; nothing has been found of definite value. The condition has something in common with superficial punctate keratitis and bullous keratitis, and can easily be distinguished from dendritic ulcer. It is most probable that diminished tension is the essential feature, and that the lines are produced by a folding of the relaxed Bowman's membrane. The author describes seven cases in detail, in two of which an eye had to be removed. Microscopical sections showed that the raised lines on the corneal surface were

due to ridges in Bowman's membrane. The ridges may be narrow and sharp or broader and show a double elevation. Sometimes there is a break in the continuity of Bowman's membrane.

LARYNGOLOGY AND OTOLOGY.

(160) Lateral Sinus Thrombosis of Tubercular Origin.

Dan McKenzie records the case of a boy, aged 13, in whom thrombosis of the lateral sinus developed in the course of a tubercular affection, with symptoms simulating those of pyæmia (*Journ. Laryng., Rhinol. and Otology*, February, 1916). The patient complained of discharge from the left ear and pain. He had had otorrhœa in infancy, but this had cleared up until three weeks before admission. There was some swelling and œdema over the mastoid process, and slight tenderness on pressure. A Schwartze's operation was performed. The cortex of the mastoid process and the underlying cells were removed without any pus being encountered. The antrum was found to be full of granulations, and pus was found in a deep, highly-placed cell. The suppurative process was continued down the apophysis as far as the apex. The lateral sinus was exposed, but the author was not aware that it was injured. Three days later, sudden venous hæmorrhage occurred from the sinus. A rigor occurred twelve days later. An exploratory operation was performed, at which the sinus was found to have an opening in it. The vein was patent and healthy above the wound. Below a coagulum was found filling the sinus and extending toward the jugular bulb. The bone was opened up and the coagulum turned out. The jugular vein was found to contain *staphylococcus albus*. At first the patient improved, but the subsequent course of fever suggested further trouble. A week later an abscess was found in the neighbourhood of the sacro-iliac synchondrosis. No dead bone was found, and there was apparently no communication with the hip-joint. The patient was tested with tuberculin and reacted promptly. A second dose of tuberculin was followed by a distinct reaction and the gluteal wound cicatrized. The mastoid and cervical wounds healed. Under continued tuberculin treatment, the patient improved markedly.

(161) Intranasal Treatment of Extranasal Affections.

E. Mayer (*Laryngoscope*, February, 1916) deals with the successful intranasal treatment of some affections more or less remote from the nose. In the first place, he speaks of headaches which have their origin in the nose. As a rule, this organ is not examined in cases of obstinate headache, save as a last resort. At times the middle turbinate is found to be at fault, while Stout and Sluder have dealt with other forms of non-suppurative intranasal conditions, which give rise to headache. At times the headache of nasal origin persists after the removal of the cause, because there may be an associated malarial state. After discussing in general terms some abscess conditions, he gives details of a case in which the symptoms pointed to acromegaly, basilar meningitis, etc. The removal of the turbinate and the drainage of the ethmoidal cells sufficed to remove the very severe symptoms. In the last place, the author discusses the intranasal treatment of dysmenorrhœa. He states that an American, J. N. Mackenzie, first described the association between the nose and the genitalia. Fliess described the so-called genital spots in the nose some years later. These spots are situated on the inner part of each inferior turbinate and the *tuberculum septi*. The *tuberculum septi* is an elevation on the nasal septum, directly opposite the lower end of the middle turbinate. The author relates that he has found that in 50% to 75% of all cases, intranasal treatment with trichloracetic acid leads to the permanent cure of dysmenorrhœa. In these cases the application of cocaine relieves the pain almost immediately. The trichloracetic acid is applied in crystal form on a plug of cotton wool to the genital spots four times, at intervals of five or six days between two periods. At times the discomfort of the application is considerable, but the patients usually tolerate it, on account of the relief it brings. The course of four applications should be repeated once or twice, until complete freedom of pain is achieved.

(162) Blood Clot Dressing in Mastoid Operations.

K. K. Wheelock (*Laryngoscope*, February, 1916) pleads for the use of the blood clot dressing for wounds in the operation for simple mastoid abscess. He points out that the method is based on some experiments made by Blake 25 years ago. Blake found that the patient's blood formed an excellent framework for closing and reconstructing the bone. This method was regarded as a fad by some surgeons, but the author has convinced himself that the use of blood clot has very material advantages. It has been shown that the serum has a well-defined germicidal power. This power has been studied by numerous bacteriologists, and is universally recognized. The germicidal power continues for 48 hours after the separation of the serum. After the mastoid operation has been completed, and every trace of affected bone removed, the dead cavity is allowed to fill with the patient's own blood, and after it has clotted, the skin is closed over the clot. He claims that no deformity results, and that only a linear scar is formed. He has not met with failure in a single case.

(163) Radiological Diagnosis of Mastoiditis.

E. Amberg (*Laryngoscope*, January, 1916) details the histories of 14 cases of mastioditis, in which X-rays were employed to clear up the diagnosis. After reviewing the literature on the subject, he concludes that the value of the interpretation of radiograms in mastoiditis is increased, when they are compared with radiograms of the same structures in health. Repeated X-ray examination has proved of value to him in doubtful cases. According to Cheatle, there is a tendency for the structure of the mastoid to be symmetrical, and consequently it is advisable to compare the appearances in the affected side with those in the healthy side. The author points out that slight changes are met with in almost all suppurative conditions of the middle ear. Consequently, it is not always possible to distinguish by means of radiograms between the changes due to middle ear disease and those due to the more serious involvement of the mastoid. A negative X-ray picture cannot be regarded as excluding serious mastoiditis. The author regards the radiographic diagnosis of mastoiditis as a valuable aid to the clinical diagnosis.

(164) Sphenoidal Inflammation Causing Tic.

G. Sluder records two cases of tic douloureux, which he has been able to trace to an inflammatory condition of the sphenoidal sinus (*Laryngoscope*, February, 1916). The first patient complained of pain running through the upper jaw and radiating under the zygoma and down the neck and shoulder. The pain was sharp and stabbing in character. Movement of the head precipitated the pain. He regarded the pain as a manifestation of neuralgia of the spheno-palatine ganglion. The patient has had a coryza. Treatment of the sphenoidal sinus, which had become infected from the coryza, resulted in complete relief of the pain. A subsequent return of the coryza heralded a repetition of the pain. The same treatment again yielded equally good results. The second patient had had a bilateral sphenoidal empyema, more marked on the right side. Pain corresponding to the distribution of the second and third divisions of the fifth nerve was present. The treatment of the suppurative process in the sphenoidal sinus effected a complete cure of the tic douloureux.

(165) Bleeding Septum Polypus.

Taro Matsui records two cases of polypus arising from the lower turbinate, in which free bleeding took place, but which proved to be non-malignant (*Laryngoscope*, February, 1916). He discusses these cases minutely, and shows that the histology of these tumours was the result of hyperplasia of connective tissue and increase in the vessels. In places there was some exuded blood and traces of degenerate glands were seen. He is of opinion that it is wrong to speak of septum polyps, since these tumours arise from the turbinals as well as the septum, although they usually involve the septum at some period. They are always associated by constant bleeding, which arouses the suspicion of malignancy. They arise from the tissue of the gland stratum of the nose.

THE MEDICAL ACTS OF AUSTRALASIA.

The conditions under which graduates and diplomates in medicine and surgery may be registered as legally qualified medical practitioners, and the provisions regulating medical practice within the Commonwealth and the Dominion of New Zealand, are, as is well-known, neither uniform nor wholly in keeping with the principles governing ideal relationships between the medical profession and the public. The Federal Committee of the British Medical Association in Australia have had this matter under consideration for some time, and an attempt is being made to formulate provisions which would be applicable to all parts of the Commonwealth, and which would protect the public against incompetent and undesirable practitioners at the same time as it would protect the interests of the members of the profession. It is hoped that a satisfactory bill may be drafted, and this bill could then be presented to the Parliaments of the various States, so that, after its passage, the conditions might be uniform throughout the Commonwealth. Whether a further movement in the direction of transferring the six Acts from the State to the Federal Statute book should be urged must be determined after the desired uniformity has been attained. Similarly, the question whether there should be one Medical Register or six can only be decided when the conditions of registration in each State has been brought to one level. It must, however, be understood that it may be found that one or more of the existing Medical Acts are satisfactory; should this be the case, it would follow that no disturbance of the provisions in the State concerned would be sought. In the following, the six Australian and the one New Zealand Medical Acts are analysed, and the provisions compared, in order that a clearer idea may be gained as to the extent of the reform required.

Medical Boards.

The constitution of the Medical Boards does not vary markedly. In Victoria, New South Wales, Queensland and Western Australia, the Governor in Council appoints a Board of not less than three members, one of whom he shall nominate to act as its president. The members of the Board are to be medical practitioners. In the case of Western Australia, the Board shall not consist of more than seven members. In Victoria, Queensland and Western Australia, the Governor has the power of removing the members of the Board or any of them, and of appointing others in their places. In Tasmania, the provisions are the same, save that the Act prescribes that the number of members shall be nine. In New Zealand, there shall be seven members, of whom one shall be the Inspector-General and the other six shall be appointed by the Governor. The constitution of the Medical Board in South Australia differs from that in the other States. It consists of five members, of whom two shall be nominated by the Minister, two by the registered medical practitioners of the State, and one by the Council of the University of Adelaide. The actual appointment is in the hands of the Governor. Should the medical practitioners or the Council of the University fail to nominate a person for appointment, the Governor may proceed to appoint a member without nomination. The president is nominated by a majority of the members of the Board each year, and the Governor makes the appointment.

In South Australia, a registered medical practitioner may be appointed by the Governor, after nomination by a majority of the members of the Board, to be Registrar. The Board has the power to appoint its own Secretary. In New South Wales, the Governor appoints the Secretary. There is no provision in the Victorian, Queensland or Tasmanian Acts in respect to the appointment of either a Registrar or a Secretary. In Western Australia, the Board has power to appoint, pay or dismiss a Registrar and other officers. In the New Zealand Act, the Registrar-General appointed under the Births and Deaths Registration Act, 1908, acts as Registrar and Secretary.

Duties and Powers of the Medical Boards.

The Medical Boards are required to establish and keep a Medical Register. They have power to examine persons applying to be registered, and to take evidence, save in the case of Victoria, Queensland and New Zealand. No reference is made to the removal of the names of deceased practitioners from the Register in Queensland. In Victoria, a name may be erased if no reply is received within six months of the sending of a letter enquiring whether the practitioner has ceased to practise or has changed his residence. In the other Australian States a name may be removed for other reasons. In New South Wales a name may be removed if the individual has ceased to possess or does not possess the qualification in respect of which he was registered; if he has been convicted of any felony or misdemeanour, or of any offence, which, if committed within the State of New South Wales, would be a felony or misdemeanour; or if he has been guilty of infamous conduct in any professional respect. In South Australia practically the same provisions obtain. In Western Australia and in Tasmania the name may be removed if the practitioner has been convicted of a felony or misdemeanour, or if he is adjudged to have been guilty of infamous conduct in any professional respect. In New Zealand the Board may apply to the Supreme Court for an order for the removal of the name of a person from the register for the same reasons as are stated above.

Qualifications for Registration.

Registration in Queensland is effected in accordance with the provisions of the Medical Act of 1867. It is therefore little surprising that the conditions are unsatisfactory, and that the Ministers have been urged to introduce an amending bill, to bring the Medical Act of this State into line with the requirements of the day. In the case of Victoria, the principal Act was passed in 1890, and this Act holds good to-day, save in so far as the registration of graduates and diplomates during the period of the war is concerned. In New South Wales, the Medical Practitioners' Act of 1912 has been amended in 1915 in respect to the section dealing with the qualification of persons entitled to registration. The New Zealand Act was passed in 1914, and contains provisions of an unusual character.

The simplest Act in this respect is the Queensland Act. All persons, who have passed through a course of study of not less than three years' duration and who have received, after examination, a diploma, degree or license entitling them to practise medicine in the country in which the degree, diploma or license was granted, shall be entitled to registration. In addition, a person, who is or has been a medical officer duly appointed and confirmed of His Majesty's sea or land service, is entitled to be registered in every State in Australia. In effect, the law of Queensland admits of the registration of any person who has obtained permission to practise in any part of the world, provided that the short space of three years has been spent in study at a medical school.

In Victoria, the qualifications required include the diplomas of the Colleges of Physicians and Surgeons and the Society of Apothecaries of London, and the Apothecaries' Hall of Dublin, and degrees of British or Colonial Universities. In addition, any person, who has been registered in the Medical Register of the United Kingdom, and any graduate or diplomate of a British or foreign university or other recognized body requiring a three years' course of study, are entitled to be registered. In other words, the qualifications in Victoria are those obtaining in the United Kingdom, or the holding of a foreign certificate entitling the holder to practise in the country in which the certificate was received. The only restriction is the meagre one that a course of three years' duration shall have been passed.*

The Tasmanian Act is also simple. Persons entitled to registration are limited to those who are registered in the United Kingdom or who are entitled to be so registered. Foreign practitioners, save those who hold British qualifications, cannot be registered. The limited reciprocity obtaining between Great Britain and Italy would presumably apply also to Tasmania.

The provisions of the Western Australian Act are the same as those of the Victorian Act in respect to qualification for registration.

The South Australian Act of 1913 differs markedly from the foregoing. All persons who hold a degree in medicine or surgery of any university in the Commonwealth or New

* In the Amending Act of 1915 the period named is four years.

Zealand, all persons who are registered or who are entitled to be registered in the United Kingdom, and all persons who have studied for not less than five years in a British or foreign school of medicine, and have obtained sanction to practise in the country in which they have obtained a degree, diploma or license, provided that equal rights and advantages are granted in that country to persons registered under the South Australian Act, are entitled to be registered. In brief, Australian and New Zealand graduates, persons registerable in the United Kingdom, and persons registered in countries in which reciprocal arrangements in regard to medical registration have been arrived at, are entitled to registration.

The qualifications for registration in New South Wales contained in the 1912 Act were modified in two directions by the "Medical Practitioners (Amendment) Act, 1915." This amending act has been dealt with at some length in *The Medical Journal of Australia*, of October 30, 1915, pp. 430-432, Novmber 6, pp. 453-455, November 13, pp. 476-478 and November 27, pp. 513-514. The persons entitled to registration within the State include graduates of Australian Universities, graduates of a University in Great Britain or Ireland, diplomates of the corporate colleges in the United Kingdom, and of the two Apothecaries' societies. The reciprocity clause enacts that the course of study of the graduate or diplomate of the university or other body other than those named above shall be not less than five years, and that practitioners who hold an Austrian or German degree only, or who are German or Austrian subjects, are excluded. In practice, for the present only, British graduates or diplomates are registerable in New South Wales, since no country has agreed to grant privileges to New South Wales practitioners equal to those offered in Section 4, subsection (b) of the amending act.

The New Zealand Medical Practitioners' Act of 1914 contains the following provisions in regard to registration. The persons eligible are graduates of the University of New Zealand, practitioners registered or eligible for registration in the United Kingdom, and the holders of foreign diplomas, which have been granted by a University or other institution approved by the Board, in a country with which reciprocal arrangements have been arrived at. Certain persons, however, are excluded, *viz.*, persons who have been convicted of any offence punishable by imprisonment with hard labour for a term of two years or upwards, and persons who are not of good fame and character. A series of provisions have been introduced for the purpose of excluding undesirable persons from the roll of practitioners. In the first place, persons seeking to be registered must give notice one month before of their intention to apply for registration by the insertion of a paragraph in the official *Gazette*, and also in the daily press. All documents must be deposited at the office of the Registrar at least one month before the date of the application. Objection may be raised by any person to the registration of any applicant. Objections must be in writing, and must contain the reasons for the same, and this statement must be forwarded to the Registrar. At the expiration of the month the Registrar-General shall submit to the Medical Board the application, together with all documents supplied by the aplicants and all objections received. The Board has the right to examine the applicant on oath, as well as the persons raising objection to the registration. If the Board refuses the application, the applicant may appeal to the Supreme Court, and the Supreme Court may order the Board to register the applicant, or may refuse to make this order. The Chairman of the Board may, if he thinks fit, direct the Registrar-General to issue a provisional certificate, entitling the applicant to practise as a medical practitioner pending the consideration of his application. This certificate shall remain in force until the registration is completed, or until it has been cancelled or has lapsed. Under no circumstances will a provisional certificate be given for a period longer than three months; it can, however, be renewed. The certificate may be cancelled at the direction of the Board at any time.

Fees for Registration.

A registration fee is required in Victoria, South Australia, Tasmania and New Zealand. In Victoria, the sum of five guineas must be paid on application, and a further charge of 5s. is required for the certificate of registration. Five shillings is charged for an inspection of the register or for any alteration. In South Australia, the registration fee is one guinea, and is annual. After five guineas have been paid no further fees are required. The practitioner may pay the full fee of five guineas on registration. In Tasmania, a fee of three guineas is charged. The sum of 10s. 6d. is required for the registration of additional qualifications, and that of one guinea for the restoration of a name to the register. In New Zealand, the registration fee is three guineas, payable on the deposit of the diploma or other evidence of qualification. Five shillings is charged for the certificate. The fee for an alteration of or addition to the qualification is 10s., for the restoration of a name is one guinea, for any other alteration of the register 5s., and for inspection 2s.

Regulations of Medical Practice.

Medical practitioners registered in the various States of Australia or in New Zealand enjoy certain privileges, and are subjected to certain restrictions. A penalty is prescribed in every case, save that of Queensland, for the offence of making a false statement, or uttering a false or forged degree or diploma, or forging, altering or counterfeiting a certificate, or making false representations, for the purpose of obtaining registration. The maximum penalty is imprisonment with or without hard labour for three years. Persons whose names are not included in the Medical Registers, are debarred from using the title of physician, doctor of medicine, licentiate in medicine and surgery, bachelor of medicine, or surgery, or any title implying that they are legally qualified medical practitioners. A penalty for this offence is prescribed in each Act, save in that of Queensland. For the first offence, a fine of £50 is imposed, and for a continuance of the offence the individual may be fined £5 for each day from the time when the offence was first committed, or may be imprisoned for a term not exceeding 12 months.

It is specifically provided in all the Medical Acts, save that of New South Wales, that a registered medical practitioner may sue for fees. The omission in the case of New South Wales does not, however, deprive practitioners of this right. In the Victorian, South Australian, Western Australian and New Zealand Acts, clauses are included stipulating that no unregistered person shall hold an appointment as physician, surgeon or medical officer on a passenger or other vessel leaving a port in the State, or in any hospital, infirmary, lunatic asylum, gaol, or other public institution in which persons are granted medical relief in sickness, infirmity or old age. The same provision applies to appointments as medical officer of health. This provision does not affect any medical officer in His Majesty's sea or land service. In the Victorian, Queensland, South Australian and New Zealand Acts, it is provided that all certificates required by any Act of Parliament must be signed by a registered practitioner. All certificates signed by other persons are deemed to be invalid. In the case of South Australia, this provision does not apply where no registered practitioner resides within five miles of the place where a death has taken place.

In the Medical Act of Western Australia, it is enacted that no person other than a registered medical practitioner shall be entitled to practice medicine or surgery. The penalty for this offence applies to the principal offender, his assistant, servant, agent or manager, and is limited to a fine of not less than £2 and not more than £50, with costs, for each act. In the same Act it is provided that all unregistered persons advertising or holding themselves out, either directly or indirectly, as being entitled to practise medicine or surgery, or to give or perform any medical or surgical service, attendance, operation or advice shall be liable to the same penalties.

In New South Wales, any person advertising that he treats disease, injury or ailment, must include his full name and address in the advertisement, and shall exhibit on the house in which the treatment is carried out the same name. Failure to obey this provision is punishable by a fine of £20, and, in the event of a continued offence, the fine is £5 for each day from the time of the commission of the first offence, or imprisonment for a term not exceeding six

months. Similar penalties are imposed on persons falsely purporting to be the person named in the advertisement or notice.

In South Australia, an unregistered person, who advertises himself or holds himself out to be a doctor of medicine, licentiate in medicine or surgery, master in surgery, bachelor of medicine or surgery, doctor, legally qualified or registered medical practitioner, accoucheur or other medical or surgical practitioner, etc., or is entitled to practise medicine or surgery, etc., is liable to a penalty of not less than £5 and not more than £50, or imprisonment for six months with or without hard labour. Excepted from this provision are persons who have been practising medicine or surgery continuously since 1884, who may use the title of "doctor." According to the Act, it is an offence punishable by fine to exhibit, publish or cause to be exhibited or published, any document to be used in connexion with the practice of an unregistered person.

In the New Zealand Act there is a clause rendering it a penal offence for a medical practitioner to accept a commission from a chemist.

Some of the Medical Acts contain provisions dealing with matters not directly concerned with medical practitioners, or with the regulation of medical practice, such as the conditions governing the registration of dentists and pharmacists, those governing the procedure in the Coroners' Courts, and those governing the use of the British Pharmacopœia. It must, however, be pointed out that, in regard to these special matters, and also in connexion with the provisions which are included in some of the Acts and omitted from others, the necessary enactments are contained in special Acts.

Naval and Military.

In the official lists published on April 17, 1916, it was announced that Captain S. J. H. Moreau is ill.

According to the daily press, the President of the French Republic has, with the approval of His Majesty the King, bestowed the Croix de Chevalier decoration on Captain D. McWhae, A.A.M.C., in recognition of his distinguished service during the campaign.

In the list of recipients of "Anzac" decorations, the following names have appeared:—

C.B.: Surgeon-General N. R. Howse, Director of Medical Services in Egypt.

C.M.G.: Colonel Hon. J. Beeston, A.A.M.C.; Lieutenant-Colonel C. M. Begg, N.Z.A.M.C.

D.S.O.: Captain A. G. Butler, attached to the 9th Battalion, Q., A.A.M.C.; Major E. J. O'Neill, N.Z.A.M.C.

Special Correspondence.

(By Our Special Correspondent.)

LONDON LETTER.

The Financial Position of Oxford University.

The Vice-Chancellor of the University of Oxford has recently published a memorandum calling attention to the financial circumstances of the University.

The estimate of receipts made in February, 1915, came to £37,749 10s. 10d., and the estimate of payments to £50,958 0s. 10d., leaving an estimated deficit of £13,208 10s. The present estimate of receipts is £36,734, and of payments £48,663 4s. 8d., reducing the deficit to £11,929 4s. 8d. On the receipt side these figures are to a large extent ascertained; but some uncertainties are specified. On the payment side, a reduction from the estimate has been made of £1,029 11s. 8d., by suspension of repayment of loans: these payments are merely postponed. There has also been a reduction of £1,400 on other internal expenditure. To the deficit balance of £11,929 4s. 8d. must be added the deficit carried on from the previous year, £3,249 19s., making a total deficit of £15,179 3s. 8d.

For meeting this deficit, the University must depend on voluntary contributions and windfalls, and on a severe policy of retrenchment. Under the first head the University has been promised, or has actually received, no less than £17,688, so that the accounts at the present moment, on the basis of the above estimate of receipts and payments, show an actual credit balance of £2,508 16s. 4d. This sum of £17,688, due to voluntary contributions and windfalls, does not make the University secure. It would enable the University to start the next year with a balance, if it were used so far as necessary to extinguish the present deficit; but there would then be little on which the University could count for certain, except the somewhat small balance, to meet the deficit on next year's working, which can hardly be less than £12,000. The heads of departments have made considerable retrenchments in the past year, but it is not easy to carry out a very drastic policy in regard to the various departments. It is necessary to keep them up sufficiently to prevent deterioration, even where there are no students, and this is expensive. In some cases the needs of medical students prevent the closing of a department, and in several laboratories important Government work is being carried on.

In a Convocation held on December 2nd, Mr. Grant Robertson, Fellow of All Souls, speaking on behalf of the Hebdomadal Council, moved an important decree, the object of which was to suspend the award of nearly all the University scholarships and prizes, for which the examination or election would be held or the exercises otherwise be sent in after May 1, 1916; and to transfer the emoluments arising from this suspension to the General Fund of the University during the emergency period. The decree was carried by 45 votes to 13.

"Trench Feet."

On January 28th, Dr. Leonard Hill delivered a lecture at the Royal Institution of "The Science of Clothing and Prevention of Trench Feet." He disagreed with the prevalent idea that cold is the cause of all illnesses, and said that our defensive measures against it had gone too far. Cold increased the metabolism of the body, and thereby promoted the joy of life. The variations of temperature, against which people were at pains to protect themselves, were beneficent, and danger lay in windless or stagnant air and in the skin being the same temperature all over. Men in our Army, who had been accustomed to sedentary lives in a confined atmosphere, gained in appetite, growth and colour under exposure; but they were subject to the danger of trench foot, which was due to rapid cooling not only of the surface but of the whole limb, especially through water soaking into the tissues and damaging their vitality. Grease could be used to keep the water out, and the natural grease in the skin also helped, but when boots were full of water for prolonged periods the grease got used up, and the tissues, being penetrated by water, were attacked by bacteria. He commended the Italian method of covering the feet with a fabric soaked in grease, to prevent the water from entering the tissues. If the soldier was standing in mud, the place in which he stood became to some extent warmed, and this gave a certain degree of protection, but in running water the conditions were much worse. The problem was how to keep out both wet and cold, and in regard to temperature there was not so much importance in the kind of fabric used for clothing as in its capacity for retaining dry air. He described and illustrated the sort of garments used by the people of Labrador, and, referring to the footgear, showed that it consisted of elastic, water-tight skins in two or three layers, which held dry air. In contrast with this excellent method was the Army boot, which was hard and close-fitting, and had plenty of metal to increase its conductivity. Some form of wader, on the Labrador principle, in combination with stockings soaked in oil, was to be recommended.

Experiments with an electric fan showed the effect of wind-pressure in lowering the temperature of the body, an interesting discovery being that there was no increase in the rate of cooling beyond 80 miles an hour.

Crime Statistics.

The annual report of the Prison Commissioners, which was published towards the end of 1915, reveals a large decrease in crime throughout the country, presumably in conse-

quence of the war. One hundred and fourteen thousand two hundred and eighty-three persons were received under sentence in 1914, the decrease amounting to 27,320, as compared with the previous year. There were convicted on indictment 5,872, as against 7,738, and summarily 98,128, against 128,686. The number of people imprisoned as debtors or on civil process fell from 14,138 to 8,913. In 1904-5, the high-water mark of criminal convictions was reached—197,941. Last year the number was the lowest on record, male criminals showing a decline of 28,903 and female criminals of 3 521. The Prison Commissioners ascribe the falling off throughout the country of the male prison population to (1) the enlistment of many habitual petty offenders; (2) restricted hours for the sale of intoxicating liquors; and (3) the great demand for labour, rendering employment easy and well-paid. The governor of a northern prison calls attention to the extraordinary reduction in the number of receptions of men of the recruiting age (18 to 40). The numbers of that age at that prison fell, after August, 1914, from 191 to 66. There has been a remarkable decrease in the numbers convicted of ages under 30, and the decrease was extended in 1914 for the first time to ages from 40. The actual decrease in the age categories of males up to 40 years was no less than 20,614, or 72% of the total decrease which has taken place. Reports generally from prisons all over the country agree as to the good effect on the prison population of the early closing of public-houses. It has been frequently stated that since the outbreak of war there has been an increase in drunkenness among women. In this matter the Commissioners assert it is not safe to rely too much on statistics. So far as prison statistics go, they do not support the view that drunkenness among women has increased.

Correspondence.

COLLOID DEGENERATION OF THE SKIN.

Sir,—In reference to our article on colloid degeneration published in the *Journal* on 8th April, we omitted to give the name, etc., of one of our patients, through the card being mislaid, and would now like to supply that information. The patient was E. McL., æt. 35 years, a carpenter, and formerly an orchardist. We find that his face and neck are affected, as well as the dorsum of the hands. Another patient was attended some time back with a similar condition, namely, a female, M.H., æt. 16 years, of Gosford.

Yours, etc.,

L. P. JOHNSTON.

183 Macquarie Street, Sydney,
18th April, 1916.

INSANITY DUE TO MITRAL STENOSIS.

Sir,—To the most casual reader it is obvious that the intention of my report on the three cases of mitral stenosis was not to try and create a mitral stenosis insanity, but merely to show that in cases of insanity when the stress causing the mental breakdown could be reasonably attributed to mitral stenosis and its effects on the general economy, we find certain mental symptoms appearing constantly enough to justify our looking for them in all cases of the same heart lesion, in which the heart's condition is regarded as the exciting cause of the insanity. In the course of each year I make over two hundred *post-mortems* on insane folk, whose clinical histories have been supplied by experienced alienists, and these three cases were selected from others showing similar association of mental and physical conditions, because they were about the same age and all had hereditary influences, collateral or direct, well marked. In submitting a report of this kind, one must necessarily rely upon the knowledge of the subject which one's readers possess. It is not necessary for Dr. Howley to point out in a letter to a journal read by medical men almost exclusively that one of the cases of mitral stenosis in the terminal stage had albuminuria, as the readers all know what to expect in mitral stenosis, and, as a rule, credit the writer of an article with the same intelligence. If Dr. Howley thinks I am not right he is perfectly at liberty to say so, but he might very well leave out the portion of his letter referring to medical men nowadays using indifferent methods of reasoning, unless, of course, he is speaking of his own efforts.

Yours, etc.,

W. A. T. LIND.

Pathological Laboratory, Royal Park, Vic.,
18th April, 1916.

URETHRAL DISCHARGE DUE TO A WORM.

Sir,—A rather interesting condition came under my notice this week. A man, H.M., æt. 53, married, consulted me and stated that he had been suffering from a severe urethral discharge for about a week. The discharge was rather profuse, but thin and watery in character. There was no pain in passing water. I gave him *mist. copaib.* and a weak injection of *zinci sulph.* This was continued every second day without any improvement, so I gave him *inject. hydrarg. biniod.* Three hours afterwards he passed a worm about two inches long, rather gray in colour, large round head and a striated body. The whole condition immediately cleared up.

Yours, etc.,

A. REGINALD McLEOD, M.D.

Tumbarumba, 21st April, 1916.

Births, Marriages, and Deaths.

The charge for inserting advertisements of Births, Marriages and Deaths is 5s., which sum should be forwarded in money orders or stamps with the notice, not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

BIRTH.

DUNLOP.—On March 19, 1916, at St. Aiden's Private Hospital, Melbourne, to Mr. and Mrs. J. W. Dunlop (Dr. Gertrude Buzzard)—a daughter.

Proceedings of the Australasian Medical Boards.

VICTORIA.

The following have been registered under the provisions of Part I. of the "Medical Act, 1915," as duly qualified medical practitioners:—

Crawford, Harold, M.B. et Ch.B., Melb., 1916.
de Crespigny, Francis George Travers Champion, M.B. et Ch.B., Melb., 1916.
Doyle, Gerald Vincent Francis, M.B. et Ch.B., Melb., 1916.
Friend, Colin, M.B. et Ch.B., Melb., 1916.
Mendelsohn, Harris, M.B. et Ch.B., Melb., 1916.
Morgan, Frederick Grantley, M.B. et Ch.B., Melb., 1916.
O'Sullivan, Mitchell Henry, M.B. et Ch.B., Melb., 1916.
Praagst, Howard Francis, M.B. et Ch.B., Melb., 1916.
Tymms, Albert Oscar Vincent, M.B. et Ch.B., Melb., 1916.

QUEENSLAND.

The following have been registered under the provisions of the "Medical Act, 1867," as duly qualified medical practitioners:—

Porter, Albert Harding, L.R.C.P. and S., Edin., L.F.P.S., Glasg., 1894.
Young Wai, Joshua, M.B., Sydn., 1914.
Additional Qualification.
Nisbet, Alwyn T. H., Ch.M., Sydn., 1916.

Medical Appointments.

Dr. S. G. Skewes has been appointed Acting Officer of Health for Bright Shire, Victoria, during the absence of Dr. L. S. Kidd, who is on active service.

Dr. H. C. Wilson has been appointed Acting Officer of Health for the West Riding of South Gippsland Shire, Victoria.

Dr. E. H. Lindsay has been appointed Public Vaccinator for the north-western district at Ouyen, Victoria.

Dr. H. Currell has been appointed Public Vaccinator for the metropolitan district at Kensington, Victoria.

Dr. C. St. L. Willis has been appointed Government Medical Officer at Milton, in the place of Dr. C. S. Renwick.

Dr. Charles M. de Lepervanche, J.P., has been appointed Deputy Licensing Magistrate of the Licensing Court for the district of Narrabri, during the absence of the Licensing Magistrate.

The appointment of Edward B. Harkness, Esq., J.P., Under Secretary in the Department of the Chief Secretary, etc., in New South Wales, to the position of member of the Baby Clinics, Pre-maternity and Home Nursing Board, vacated by G. H. S. King, Esq., is announced in the *New South Wales Government Gazette* of April 20, 1916.

Dr. F. A. Hadley, F.R.C.S., has been appointed Honorary Assistant Surgeon at the Perth Public Hospital.

The resignation of Dr. J. E. F. Deakin from the position of Honorary Assistant Surgeon at the Perth Public Hospital is announced in the *Government Gazette* of Western Australia of April 14, 1916.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xiii.

Texas District Hospital, Queensland, Medical Officer.
Brisbane Hospital, Resident Medical Officer.
Western Australia, Medical Officer of Health.
General Hospital, Hobart, Junior House Surgeon.
Cue Day Dawn, W.A., Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Department of Public Instruction—New Appointments as Medical Officer, Ophthalmic Surgeon, Ear, Nose and Throat Surgeon, Physician. Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance Association and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, Auburn, and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Brisbane United F.S. Institute. Croydon Hospital. Laidley Hospital, Medical Officer.
WESTERN AUSTRALIA. (Hon. Sec., 230 St. George's Terrace, Perth.)	Swan District Medical Officer. All Contract Practice Appointments in Western Australia.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide.
NEW ZEALAND: WELLINGTON DIVISION. Hon. Sec., Wellington.)	F.S. Lodges, Wellington, N.Z.

Diary for the Month.

May 3.—Cent. South. Med. Assoc. (N.S.W.).
May 3.—Cent. West. Med. Assoc. (N.S.W.).
May 5—Q. Branch, B.M.A., Branch.
May 9.—N.S.W. Branch, B.M.A., Ethics Committee.
May 9.—Tas. Branch, B.M.A., Council and Branch.
May 11.—Vic. Branch, B.M.A., Council.
May 12.—N.S.W. Branch, B.M.A., Clinical Evening.
May 12.—South Aust. Branch, B.M.A., Council.
May 16.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
May 17.—West Aust. Branch, B.M.A., General.
May 19.—Q. Branch, B.M.A., Council.
May 25.—South Aust. Branch, B.M.A., Branch.
May 26.—N.S.W. Branch, B.M.A., Branch.
May 30.—N.S.W. Branch, B.M.A., Medical Politics Committee, Organization and Science Committee.
May 31.—Vic. Branch, B.M.A., Council.

EDITORIAL NOTICES.

The following journals are missing from the Library of the Victorian Branch of the British Medical Association. The Librarians will be indebted to any member who will give or sell any or all of the numbers.

Lancet, October 3 and May 29, 1915.
Edinburgh Medical Journal, December, 1915.
Universal Medical Record, May, 1914, title page and index of Part I., 1914, January, 1915.
Annals of Surgery, April, August, October, 1911.
Glasgow Medical Journal, October, 1912.
Birmingham Medical Review, January, July, 1903, November, 1904, March, 1911, August, October and December, 1912, and title page and index, Parts I. and II., 1912, January and February, 1913, April, May and November, 1914, title page and index, Parts I. and II., 1914, January and April, 1915.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.